

# HUNTERIAN SOCIETY

## TRANSACTIONS.

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SESSION 1895-96.



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## ERRATA.

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Page 11—Stevens, T. G., *for* 1, Newington Green, *read* 8, St. Thomas' Street, S.E.

Page 16—*For* Bynams and Mansby *read* Bignami and Mannaberg.





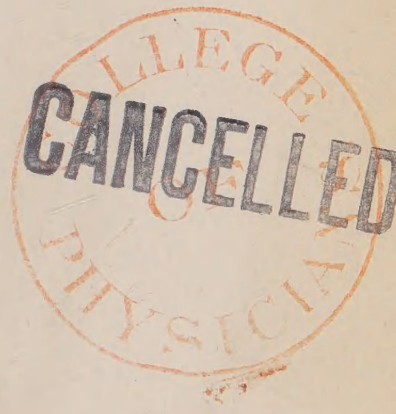
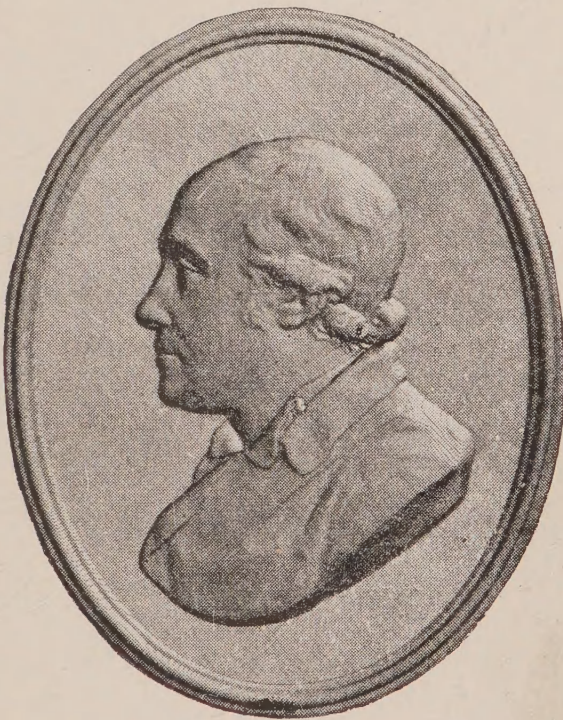
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ABSTRACT OF THE  
**TRANSACTIONS**  
OF THE  
**HUNTERIAN SOCIETY,**  
1895-6.  
SEVENTY-SEVENTH SESSION.



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*Ratio Societatis Vinculum.*

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LONDON :  
HEADLEY BROTHERS, 14, BISHOPSGATE STREET WITHOUT, E.C. ;  
AND ASHFORD, KENT.

1896



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## PRESIDENTS OF THE SOCIETY

FROM ITS INSTITUTION.

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---

1819	SIR WILLIAM BLIZARD, F.R.S.	1863	THOMAS MEE DALDY, MD.
1822	BENJAMIN ROBINSON, M.D.	1865	ALFRED SMEE, F.R.S.
1824	WILLIAM BABINGTON, M.D., F.R.S.	1866	STEPHEN HENRY WARD, M.D.
1826	BENJAMIN TRAVERS, F.R.S.	1867	JOHN JACKSON.
1828	ARCHIBALD BILLING, M.D., F.R.S.	1868	THOMAS BEVILL PEACOCK, M.D.
1830	THOMAS CALLAWAY.	1869	JONATHAN HUTCHINSON, F.R.S.
1832	CHARLES ASTON KEY.	1871	DENNIS DE BERDT HOVELL.
1834	BENJAMIN GUY BABINGTON, M.D., F.R.S.	1872	HERBERT DAVIES, M.D.
1836	BRANSBY BLAKE COOPER, F.R.S.	1873	THOMAS BRYANT, M.Ch.
1838	JOHN WHITING, M.D.	1874	ROBERT BARNES, M.D.
1839	JOHN SCOTT.	1875	WILLIAM SEDGWICK SAUNDERS, M.D.
1841	WILLIAM COOKE, M.D.	1876	HENRY ISAAC FOTHERBY M.D.
1843	JAMES LUKE.	1877	ARTHUR EDWARD DURHAM.
1845	RICHARD BRIGHT, M.D., F.R.S.	1878	THOMAS BOOR CROSBY, M.D.
1847	G. W. MACMURDO, F.R.S.	1879	JOHN BRAXTON HICKS, M.D., F.R.S.
1848	FRANCIS HENRY RAMSBOTHAM, M.D.	1880	JOHN COUPER.
1849	EDWARD COCK.	1881	PETER LODWICK BURCHELL, M.D.
1850	H. MARSHALL HUGHES, M.D.	1882	JOHN HUGHLINGS JACKSON, M.D., F.R.S.
1851	JOHN ADAMS.	1883	WALTER RIVINGTON, M.S.
1852	HENRY GREENWOOD, M.D.	1884	ROBERT FOWLER, M.D.
1853	JOHN HILTON, F.R.S.	1885	PHILIP HENRY PYE-SMITH, M.D., F.R.S.
1854	JOHN C. WEAVER LEVER, M.D.	1886	FRANCIS MEAD CORNER.
1855	THOMAS BLIZARD CURLING, F.R.S.	1887	HENRY GERVIS, M.D.
1856	GEORGE HILARY BARLOW, M.D.	1888	R. CLEMENT LUCAS, B.S., M.B.
1857	SAMUEL SOLLY, F.R.S.	1890	STEPHEN MACKENZIE, M.D.
1858	WILLIAM J. LITTLE, M.D.	1892	FREDERICK GORDON BROWN.
1859	D. HENRY WALNE.	1894	CHARTERS J. SYMONDS, M.S., M.D.
1860	SIR JAMES RISDON BENNETT, M.D., F.R.S.	1896	G. ERNEST HERMAN, M.B.
1861	GEORGE CRITCHETT.		



# OFFICERS

## OF THE

# HUNTERIAN SOCIETY

ELECTED FEBRUARY, 1895.\*

### President.

CHARTERS JAMES SYMONDS, M.S., M.D.

### Vice-Presidents.

HENRY J. THORP.  
JOHN S. E. COTMAN,

R. HINGSTON FOX, M.D.  
T. MARK HOVELL.

### Treasurer.

F. CHARLEWOOD TURNER, M.D.

### Trustees.

H. I. FOTHERBY, M.D.

F. M. CORNER.

### Librarian.

ARTHUR T. DAVIES, M.D.

### Orator.

G. NEWTON PITT, M.D.

### Secretaries.

T. H. OPENSHAW, M.S.

FRED. J. SMITH, M.D.

### Council.

SIR HUGH R. BEEVOR, BART., M.D.  
T. H. ARNOLD CHAPLIN, M.D.  
LOUIS A. DUNN, M.S.  
HOPE GRANT.  
FRANCIS R. HUMPHREYS.  
PATRICK MANSON, M.D.

JOHN W. OLIVER, M.D.  
GEORGE W. POTTER, M.D.  
HENRY J. SEQUEIRA.  
ST. CLAIR B. SHADWELL.  
R. G. TATHAM.  
JOHN F. WOODS.

### Auditors.

F. GORDON BROWN.  
HOPE GRANT.

FRANCIS R. HUMPHREYS.  
THOMAS GLOVER LYON, M.D.

### Library Committee.

(APPOINTED BY THE COUNCIL.)

S. H. APPLEFORD, M.D.  
T. H. ARNOLD CHAPLIN, M.D.

FRANCIS R. HUMPHREYS.  
REGINALD J. RYLE, M.B.

FRED. J. SMITH, M.D.

\* For List of Officers elected February, 1896, vide last page of Transactions.

## HONORARY FELLOWS.

---

- SIR WILLIAM JENNER, Bart., M.D., G.C.B., D.C.L., LL.D., F.R.S., Physician-in-Ordinary to H.M. the Queen and to H.R.H. the Prince of Wales, *Greenwood, Durley, Hants.*
- SIR JOSEPH LISTER, Bart., D.C.L., LL.D., F.R.S., Surgeon Extraordinary to H.M. the Queen, *12, Park Crescent, Portland Place, W.*
- SIR JAMES PAGET, Bart., D.C.L., LL.D., F.R.S., Sergeant-Surgeon to H.M. the Queen ; Surgeon-in-Ordinary to H.R.H. the Prince of Wales, *5, Park Square West, Regent's Park, N.W.*
- 

## FOREIGN HONORARY FELLOWS.

---

- JOHN S. BILLINGS, M.D., Brevet Lieut.-Col., and Surgeon, U.S. Army ; Librarian, Surgeon-General's Office, Washington.
- SAMUEL GROSS, M.D., LL.D., Professor of Surgery in the Jefferson Medical College, Philadelphia.
- RUDOLPH VIRCHOW, M.D., LL.D., Professor of Pathological Anatomy in the University of Berlin.
- 

## LIFE FELLOWS.

---

A. By payment of Twenty-five Annual Subscriptions, in accordance with Law LXIII.

When  
Admitted.

- 1856 ALLINGHAM, WILLIAM, late Senior Surgeon to St. Mark's Hospital, *25, Grosvenor Street, W.*
- 1864 BADER, CHARLES, Consulting Ophthalmic Surgeon to Guy's Hospital, *10, Finsbury Circus, E.C.*
- 1854 BARNES, ROBERT, late President, Consulting Obstetric Physician to St. George's Hospital . *Lingwood, Liss, Hants.*
- 1860 BERRY, HENRY T. . . . . *66, Pembridge Villas, Bayswater, W.*
- 1865 BROWN, FREDERICK GORDON, late President, *17, Finsbury Circus, E.C.*
- 1862 BRYANT, THOMAS, late President, Consulting Surgeon to Guy's Hospital, *65, Grosvenor Street, W.*
- 1871 BUNCOMBE, CHAS. H. . . . . *35, Montserrat Road, Putney.*
- 1858 CLAPTON, EDWARD, late Physician to St. Thomas's Hospital, *22, St. Thomas Street, S.E., and Towercroft, Lee, S.E.*
- 1858 CORNER, FRANCIS M., Trustee, late President, *Manor House, Poplar, E.*



When  
Admitted.

- 1862 COUPER, JOHN, late President, Consulting Surgeon to the London Hospital . . . 80, *Grosvenor Street, W.*
- 1854 CROSBY, THOMAS B., late President, 19, *Gordon Square, W.C., and 13, Fenchurch Street, E.C.*
- 1854 FOTHERBY, HENRY I., M.D., Trustee, late President, Consulting Physician to the Metropolitan Hospital, *Woodthorpe Cote, Wray Common, Reigate, Surrey.*
- 1862 GOWLLAND, PETER Y., late Senior Surgeon to St. Mark's Hospital, 82, *Gloucester Terrace, Hyde Park, W.*
- 1863 GREENWOOD, JAMES, M.D. . 48, *Canonbury Square, Islington, N.*
- 1862 GREENWOOD, MAJOR, M.D. . 26, *Queen's Road, Dalston, N.*
- 1862 HICKS, G. BORLASE . . . 149, *Amhurst Road, Hackney, N.E.*
- 1860 HICKS, JOHN BRAXTON, M.D., F.R.S., late President, Consulting Obstetric Physician to Guy's and St. Mary's Hospitals, 34, *George Street, Hanover Square, W.*
- 1855 HUTCHINSON, JONATHAN, L.L.D., F.R.S., late President, Consulting Surgeon to the London Hospital, 15, *Cavendish Square, W.*
- 1862 JACKSON, J. HUGHLINGS, M.D., F.R.S., late Pres. Consulting Physician to the London Hospital . 3, *Manchester Square, W.*
- 1860 LICHTENBERG, GEO., M.D. Surgeon to the German Hospital, 47, *Finsbury Square, E.C.*
- 1869 MCCARTHY, JEREMIAH, M.A., F.R.C.S., Surgeon to the London Hospital . . . 1, *Cambridge Place, Victoria Road, Kensington.*
- 1850 MILLER, CLAUDIUS M., M.D. . 100, *Stoke Newington Road, N.*
- 1841 MUNK, WILLIAM, M.D. . . 40, *Finsbury Square, E.C.*
- 1837 OLDHAM, HENRY, M.D., Consulting Obstetric Physician to Guy's Hospital . . . 4, *Cavendish Place, W.*
- 1864 PETTIFER, EDMUND H. . . 50, *Southgate Road, N.*
- 1870 PYE-SMITH, PH. H., M.D., F.R.S., late President, Senior Physician to Guy's Hospital . . . 48, *Brook Street, W.*
- 1851 RAMSKILL, J. SPENCE, M.D., Consulting Physician to the London Hospital . . . 5, *St. Helen's Place, E.C.*
- 1866 RIVINGTON, WALTER, M.S., late President, Consulting Surgeon to the London Hospital . . . 95, *Wimpole Street, W., or Coniston, Epping, Essex.*
- 1855 ROPER, GEORGE, M.D. . . . *Oulton Lodge, Aylsham, Norfolk.*
- 1853 SAUNDERS, W. SEDGWICK, M.D., F.S.A., late President, 13, *Queen Street, Cheapside, E.C.*
- 1842 SEWELL, CHARLES BRODIE, . 21, *Cavendish Square, W., and 13 Fenchurch Street, E.C.*
- 1869 SMEE, ALF. H., late President . *The Grange, Hackbridge, Surrey.*
- 1869 TAY, WARREN, F.R.C.S., Senior Surgeon to the London Hospital, 4, *Finsbury Square, E.C.*

---

B. By purchase in accordance with Law LXII.

- 1892 BEEVOR, SIR HUGH, Bart., M.B., 18, *Sergeant's Inn, Fleet Street, E.C.*
- 1865 BROWNFIELD, MATTHEW . . . 171, *East India Road, E.*

- ORDINARY FELLOWS.

When  
Admitted.

- |      |   |  |
|------|---|--|
| 1893 | ADAMS, JOHN . . . . .   | 180, Aldersgate Street, E.C.   |
| 1884 | APPLEFORD, STEPHEN H., M.D.                                     | 17, Finsbury Circus, E.C.  |
| 1889 | BARLOW, THOS. C. . . . .  | 88, Dalston Lane, N.E.   |
| 1889 | BARRETT, ASHLEY WM., M.B.                                       | 42, Finsbury Square, E.C.  |
| 1875 | BEACH, FLETCHER, M.B. . . . .                                   | 64, Welbeck St., Cavendish Square, W.<br>and Winchester House, Kingston<br>Hill, Surrey. |
| 1888 | BEDFORD, R. THOMAS . . . . .                                    | 42, Malden Rd., Kentish Town, N.W.   |
| 1893 | BERRILL, ALFRED . . . . .                                       | Waveney House, High Road, South<br>Woodford, Essex.                                      |
| 1886 | BESWICK, ROBERT . . . . .                                       | 71, Bishopsgate Street Without, E.C.   |
| 1896 | BLANDFORD, H. E., M.B. . . . .                                  | Portland House, Bedford Park,<br>Croydon.  |
| 1875 | BLEWITT, BYRON . . . . .  | 12, St. Mary Axe, E.C.   |
| 1876 | BOWKETT, THOS. E., Surgeon to the Poplar Hospital,              | 145, East India Road, E.   |
| 1888 | BREDIN, J. NOBLE . . . . .                                      | Linden Lodge, Potton, Beds.  |
| 1883 | BROWN, T. LLOYD . . . . .                                       | 24, Prah Road, Finsbury Park, N.   |
| 1889 | BURGER, ALEXANDER, M.D., M.Ch., Surgeon to the German Hospital, | 10, Finsbury Square, E.C.  |
| 1892 | BURGESS, EDWARD A. . . . .                                      | 26, Chichele Road, Cricklewood, N.W.   |
| 1896 | BURROWS, C. W. G. . . . .                                       | Weston House, Long Lane, S.E.  |
| 1896 | BYRNE, BENJAMIN . . . . .                                       | 20, Stainsby Road, Poplar, E.  |
| 1895 | CAMPBELL, H. J. M.D. . . . .                                    | 157, Manningham Lane, Bradford,<br>Yorks.  |



When  
Admitted.

- 1884 CATTELL, G. TREW, M.D. . . . 30, *Hereford Sq., South Kensington, W.*
- 1892 CHAPLIN, T. H. ARNOLD, B.A., M.D., Assistant Physician to the City of London Hospital for Diseases of the Chest, and to the East London Hospital for Children, 24, *Finsbury Circus, E.C.*
- 1892 CHETHAM-STRODE, REGINALD, M.B., M.C., 104, *Bethune Road, Stamford Hill, N.*
- 1890 CORNER, M. CURSHAM . . . 113, *Mile End Road, E.*
- 1882 COTMAN, J. S. E., Vice-President, 140, *Minories, E.*
- 1889 CRESSY, A. Z. CLAYDON . . . *Hayesden, Wallington, Surrey.*
- 1896 CROSSE, WILLIAM H. . . . 6, *Half-Moon Street, W.*
- 1885 DAVIES, ARTHUR T., B.A., M.D., Librarian, Physician to the Royal Hospital for Diseases of Chest, Assistant Physician to the Metropolitan Hospital . 23, *Finsbury Square, E.C.*
- 1879 DAVIES, JOHN . . . . 91, *New North Road, N.*
- 1895 DAVIES, MORGAN, M.D. . . . 10, *Goring Street, Houndsditch, E.C.*
- 1893 DAWSON, BERTRAND E., M.D., B.Sc., Assistant Physician to the Royal Hospital for Diseases of the Chest, 46, *Finsbury Pavement, E.C.*
- 1875 DEAN, H. P., M.B., M.S., Assistant Surgeon London Hospital, 84, *Wimpole Street, W.*
- 1892 DINGLE, WILLIAM A., M.D. . . 46, *Finsbury Square, E.C.*
- 1896 DOWNES, J. LOCKHART, M.B., C.M., 271, *Romford Road, E.*
- 1889 DUNN, LOUIS A., M.B., M.S., Senior Demonstrator of Anatomy at Guy's Hospital . . . . *The College, Guy's Hospital, S.E.*
- 1892 ETTLES, W. J. McCULLOCH, M.B., C.M., 97, *Albany Rd., Camberwell, S.E.*
- 1877 FORBES, DANIEL M. . . . . 204, *Hoxton Street, N.*
- 1896 FORDHAM, J. W. . . . . 78, *Mile End Road, E.*
- 1885 FOX, R. HINGSTON, M.D. . . . 23, *Finsbury Square, E.C.*
- 1894 FOX, FORTESCUE, M.D. . . . 7, *Albert Mansion, Northumberland Street, W., and Strathpeffer, N.B.*
- 1894 FYFFE, W. KINGTON, B.A., M.D. 19, *Duke Street, Manchester Square, W.*
- 1875 GALABIN, ALFRED L., M.A., M.D., Obstetric Physician to, and Lecturer on Midwifery at Guy's Hospital, 49, *Wimpole Street, W.*
- 1888 GALLOWAY, A. WILTON . . . . 79, *New North Road, N.*
- 1891 GALLOWAY, JAMES, M.A., M.D., C.M. Assistant Physician to Great Northern Central Hospital, 21, *Queen Anne Street, W.*
- 1893 GEORGE, ALFRED W., M.B. . . . 1, *Burton Road, Kilburn, N.W.*
- 1893 GODDING, JAMES . . . . . 747, *Commercial Road, E.*
- 1895 GOODALL, EDWARD W., M.D., B.S. Lond., Medical Superintendent Eastern Hospital . . . . *Homerton, N.E.*
- 1877 GOODSALL, DAVID H. . . . . 17, *Devonshire Place, Upper Wimpole Street, W.*
- 1875 GRANT, ALEXANDER, M.A., M.D., 370, *Commercial Road East, E.*
- 1891 GRANT, HOPE . . . . . 22, *City Road, E.C.*
- 1877 GRANT, J. DUNDAS, M.A., M.D., C.M., Surgeon to the Central London Throat and Ear Hospital . 8, *Upper Wimpole Street, W.*

When  
Admitted.

- 1887 GRANT, LEONARD, M.D. . . . 9, *Western Villas, New Southgate, N.*
- 1893 GROGONO, WALTER A. . . . *Berwick House, Broadway, and 216, High Street, Stratford, E.*
- 1894 HALLEN, A. E. H. CORNELIUS, M.B., C.M. . . . *264, Burdett Road, E.*
- 1894 HALLIDIE, ANDREW, M.A., M.B., 6, *West Street, Finsbury Circus, E.C.*
- 1894 HASLETT, W. J. HANDFIELD, Medical Superintendent, Halliford House Asylum . . . . *Sunbury-on-Thames.*
- 1892 HAWKES, LEWIS A., M.D., C.M. . . 9, *Fore Street, Cripplegate, E.C.*
- 1888 HEWER, J. LANGTON, M.D., B.S. . 33, *Highbury New Park, N.*
- 1896 HORROCKS, HERBERT, M.D. . . . *Brompton Hospital, S.W.*
- 1883 HORROCKS, PETER, M.D., Assistant Obstetric Physician to Guy's Hospital . . . . 26, *St. Thomas's Street, S.E.*
- 1884 HOUCHIN, EDMUND KING . . . . *Durham House, Stepney, E.*
- 1889 HUMPHREYS, FRANCIS R. . . . 27, *Fellowes Road, South Hampstead, N.W.*
- 1884 JACKSON, GEORGE H. . . . . *St. Levans, Upperton, Eastbourne.*
- 1896 JONES, RICHARD . . . . . *Bethnal Green Infirmary, E.*
- 1895 KER, HUGH, RICHARD . . . . . *Tintern, Balham Hill, S.W.*
- 1893 KINGSFORD, EDWARD CLAUDE . . *Carntyne, Brondesbury, N.W.*
- 1896 LANDON, E. E. B. . . . . *Higham Court, Woodford Green, Essex.*
- 1892 LANG, WILLIAM, Ophthalmic Surgeon to the Middlesex Hospital, and Surgeon to the Royal Ophthalmic Hospital, Moorfields, 22, *Cavendish Square, W.*
- 1888 LONG, F. W. DEVEREUX . . . . 6, *Spital Square, E.*
- 1896 LOWSLEY, L.D. . . . . 101, *London Wall, E.C.*
- 1892 LYON, THOS. GLOVER, M.A., M.D., Assistant Physician to the City of London Hospital for Diseases of the Chest, 8, *Finsbury Circus, E.C.*
- 1896 McCLYMONT, JOHN, M.B., C.M. . *High Road, Leyton, Essex.*
- 1876 MACKENZIE, STEPHEN, M.D., late President, Physician to, and Lecturer on Medicine at the London Hospital, 18, *Cavendish Square, W.*
- 1893 MACPHAIL, A. LAMONT . . . . 138, *Stoke Newington Road, N.*
- 1894 M'DONNELL, WM. CAMPBELL . . *Park House, Park Lane, Stoke Newington, N.*
- 1891 MANSON, PATRICK, M.D., C.M., LL.D., 21, *Queen Anne St., W.*
- 1891 MARSHALL, THOMAS, M.A., M.B., 95, *Fortess Road, Kentish Town, N.W.*
- 1894 MITCHELL, ALEXANDER, M.D. . . 41, *Devonshire St., Portland Place, W.*
- 1890 OLIVER, FRANKLIN H. . . . . 2, *Kingsland Road, N.E.*
- 1892 OLIVER, JOHN W., M.D., M.C.H., *Hackney Union Infirmary, Homerton, N.E.*
- 1884 OPENSHAW, T. HORROCKS, M.S., M.B., Assistant Surgeon to the London Hospital . . . . 16, *Wimpole Street, W.*
- 1893 OSBURN, CECIL A. P. . . . . *The Oaks, Hythe, Kent.*
- 1888 PERRY, E. COOPER, M.D., Medical Superintendent, and Assistant Physician to and Demonstrator of Morbid Anatomy at, Guy's Hospital, S.E.



When  
Admitted.

- 1888 PITT, G. NEWTON, M.D., Assistant Physician to, and Lecturer on Pathology at, Guy's Hospital, 24, *St. Thomas's Street, S.E.*
- 1875 PORT, HEINRICH, M.D., Physician to the German Hospital, 48, *Finsbury Square, E.C.*
- 1882 POTTER, GEORGE W., M.D., C.M., 8, *King Street, Cheapside, E.C., and Keldhome, Tunbridge Wells.*
- 1890 RAW, WM. E. ST. M. . . . *Oakbank, Crystal Palace Park Road, Sydenham, S.E.*
- 1892 RAWES, WILLIAM, M.B. . . . *St. Luke's Hospital, E.C.*
- 1888 REYNOLDS, W. PERCY . . . . *128, Stamford Hill, N.*
- 1896 ROBERTS, JOHN THOMAS . . . . *65, Park Road, Crouch End, N.*
- 1894 ROGERS, G. A. . . . . *404, Commercial Road, E.*
- 1896 RUSHBROOKE, THOS. . . . . *89, Stamford Hill, N.*
- 1895 RUTTER, H. L., M.B. . . . . *London Hospital, E.*
- 1888 RYLE, REGINALD J., M.A., M.B., *Hadley Green, High Barnet, Herts.*
- 1884 SCARTH, ISAAC, M.B., B.S. . . . *29, Amwell Street, E.C.*
- 1892 SCOTT, PATRICK CUMIN, B.A., M.B., Physician to the Miller Hospital, Greenwich . . . . *38, Shooter's Hill Rd., Blackheath, S.E.*
- 1892 SEQUEIRA, GEORGE W. . . . . *34, Jewry Street, Aldgate, E.C.*
- 1890 SEQUEIRA, HENRY J. . . . . *34, Jewry Street, E.C.*
- 1894 SEQUEIRA, JAS. H., M.D. . . . . *6, West Street, Finsbury Circus, E.C.*
- 1891 SHADWELL, ST. CLAIR B. . . . . *Lymhurst, Orford Road, Walthamstow, Essex.*
- 1888 SHAW, LAURISTON E., M.D., Assistant Physician to Guy's Hospital, 10, *St. Thomas's Street, S.E.*
- 1887 SMITH, FREDERICK JOHN, B.A., M.D., Assistant Physician to the London Hospital . . . . . *4, Christopher Street, Finsbury Square, E.C.*
- 1896 STEEN, JAMES R., M.B. . . . . *413, East India Road, E.*
- 1875 STEVENS, GEORGE J. B. . . . . *Wadhurst House, Stoke Newington, Green, N.*
- 1896 STEVENS, THOS. G., M.D. . . . . *1, Newington Green, N.*
- 1892 STOCKER, CHARLES JOSEPH . . . . *Weston House, Richmond Gardens, Forest Gate, E.*
- 1894 STONHAM, HENRY ARCHIBALD, . . *30, Albert Square, Ratcliff, E.*
- 1880 SYMONDS, CHARTERS J., M.S., M.D., Late President, Assistant Surgeon to, and Surgeon in charge of Throat Department, and Teacher of Practical Surgery at Guy's Hospital, 26, *Weymouth Street, Portland Place, W.*
- 1878 TALBOT, RUSSELL M. . . . . *117, Bow Road, E.*
- 1889 TARGETT, JAS., H., M.B., M.S., Assistant Surgeon to the Evelina Hospital, and Demonstrator of Anatomy at Guy's Hospital, 6, *St. Thomas's Street, S.E.*
- 1880 THORP, HENRY J. . . . . *11, Southwark Bridge Road, S.E.*
- 1890 TUBBY, ALFRED H., M.B., M.S. Assistant Surgeon to Westminster Hospital . . . . . *25, Weymouth St., Portland Place, W.*

When  
Admitted.

1890	WALKER, CHAS. R., M.D.	. . .	<i>Gainsborough House, Leytonstone, E.</i>
1887	WALLACE, Frederick	. . .	<i>Foulden Lodge, Upper Clapton, N.E.</i>
1895	WALSHAM, Hugh, M.B.	. . .	<i>32, New Cavendish Street, W.</i>
1887	WARNER, PERCY	. . .	<i>Woodford Green, Woodford Essex.</i>
1895	WASHBURN, JOHN WYCHENFORD, M.D., Assistant Physician to Guy's Hospital.	. . .	<i>15, Trinity Square, S.E.</i>
1876	WELCH, CHAS.	. . .	<i>377, Hackney Road, E.</i>
1893	WILLIAMS, GEORGE ROWLAND	. . .	<i>27, Queen Street, Cheapside, E.C.</i>
1895	WOOD, EDWARD	. . .	<i>Glebe Lodge, Windmill Hill, Enfield.</i>
1887	WOODS, JOHN F. (C)	. . .	<i>Hoxton House Asylum, N.</i>
1882	WORLEY, WILLIAM C.	. . .	<i>103, Green Lanes, N.</i>
1896	WORNUM, G. PORTER	. . .	<i>6, College Terrace, Belsize Park, N.W.</i>
1889	WRIGHT, HOLLAND H.	. . .	<i>2, Ospringe Road, St. John's College Park, N.W.,</i>
1880	YARROW, GEO. E., M.D.	. . .	<i>26, Duncan Terrace, Islington, N.</i>

The following gentlemen have been elected, but have not yet signed the Roll and been admitted :—

A. B. HARRIS	. . . . .	<i>Loughton.</i>
M. F. AGAR	. . . . .	<i>Ponders End.</i>
H. E. SIMPSON	. . . . .	<i>169, City Road, E.C.</i>
J. SNOWMAN	. . . . .	<i>75, Brick Lane, E.</i>
T. C. SUMMERS	. . . . .	<i>69, Bow Road, E.</i>
W. RADFORD	. . . . .	<i>Poplar Hospital.</i>
W. T. PARTRIDGE	. . . . .	<i>97, Albany Road, S.E.</i>

[It is requested that any change of Title, Appointments or Residence may be communicated to one of the Secretaries before the Annual General Meeting, in order that the list may be made as correct as possible.]

## CORRESPONDING FELLOWS.

BARLOW, ROBERT	. . . . .	<i>Orlebar, St. Peter's, Isle of Thanet.</i>
BARNARD JOHN H., M.D.	. . . . .	<i>362, Rue St. Honoré, Paris.</i>
CANFIELD, RALPH M.	. . . . .	<i>Boston, U.S.A.</i>
ENGLISH, EDGAR	. . . . .	<i>Mexborough, Rotherham, Yorks.</i>
HIRSCH, CHAS. T. W.	. . . . .	<i>Fiji.</i>
PIERCE, BEDFORD, M.D.	. . . . .	<i>The Retreat, York.</i>
ROBERTS, BRANSBY, M.D.	. . . . .	<i>Beadlesmere House, Eastbourne.</i>
TREVES, WILLIAM KNIGHT	. . . . .	<i>31, Dalby Square, Margate.</i>

N.B.—Written Communications on Medical Subjects and Donations of Books will be thankfully received.



# THE SEVENTY-SEVENTH ANNUAL REPORT

## OF THE

### COUNCIL OF THE HUNTERIAN SOCIETY.

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The Hunterian Society has continued in active work during the past Session. The attendance at the meetings has been well maintained, and under the guidance of the President, who kindly consented to continue in office for a second year, its deliberations have been of great service to the Fellows.

The ANNUAL ORATION, which was delivered by Dr. Patrick Manson, LL.B., upon the "Malaria Parasite," has been reproduced *in extenso* in the 1894-5 transactions, together with valuable and costly charts, and marks an exceedingly important advance in pathological and therapeutic knowledge.

The HUNTERIAN SOCIETY LECTURES in 1895 were delivered by Professor T. Clifford Allbutt, M.D., F.R.S., and Professor Sims Woodhead, M.D., F.R.S. The former took for his subject, "Senile Plethora, or high arterial tension in elderly persons," and in an address of great eloquence and literary merit discussed the symptoms, pathology, and treatment of the condition.

Professor Sims Woodhead devoted his lecture to the consideration of the probable limitations of Serum-Therapy. The lecturer discussed the whole question of the treatment of diseases by means of serum, and dealt with the subject in so just and impartial a manner as to convince all present that in special serums we possess most valuable therapeutic agents.

The evidence he brought forward with regard to Diphtheria led him to conclude that those who neglected its use incurred a grave responsibility, and that failure was often to be attributed either to too small a dose or the remedy being used at too late a stage.

Both lectures were much appreciated by the Fellows and visitors.

During the Session many valuable and interesting communications have been made to the Society, amongst the most important of which may be mentioned those by Mr. Humphreys, on the Infectious Nature of Rheumatism ; by Dr. Chaplin, on the Effect of Physiological Rest upon the Lung in Phthisis ; by Dr. Sequeira, on Chronic Pharyngeal Affections ; by Dr. Fortescue Fox, on the Varieties of Rheumatoid Arthritis.

An important discussion was held upon the desirability of forming an organization with a view to correct the grievances arising from the abuse of hospitals, dispensaries, and clubs.

The subject was introduced by Mr. Humphreys, and was ably handled by the speakers, amongst whom were several visitors.

The Clinical and Pathological Evenings have been particularly well attended, and many cases and specimens of exceptional interest have been exhibited.

Eighteen new Fellows have been added to the roll during the past year, the number at the present time being 168 Ordinary Fellows, beside 6 Honorary and 8 Corresponding Fellows.

Two Fellows have been lost to the Society by death during 1895, viz. :—DR. LOUIS PASTEUR and MR. R. G. TATHAM, and four have resigned owing to residence out of town and other causes.

MR. TATHAM became a Fellow of the Society in 1879, and was a Member of the Council in 1894 and '95. Until the last few months of his life he was a regular attendant at the meetings and took an active share in the debates of the



Society, which a ripe experience, the result of many years' active practice in the East India Road, Poplar, often enabled him to illuminate. He succeeded his father in 1860 in the surgeoncy to the East India Company, an appointment which he retained till death on the 20th December, 1895. He was a retiring, courteous gentleman, respected by all and beloved by those who knew him best.

The greatest loss, in some respects, that the Society has sustained is that of LOUIS PASTEUR, one of its most distinguished Foreign Fellows. This is not the place to record even the most brilliant of his many great discoveries, but the Council feels bound to express, however briefly, its sense of the loss the Society has maintained. Full of years, honoured by the whole world, beloved by many who knew him, and blessed in thousands of households throughout the world, he died in September, 1895, an example of devotion to science and preventative medicine never excelled and but rarely equalled.

Particulars of the Society's income and expenditure will be found on the accompanying balance-sheet. The financial condition of the Society, notwithstanding the increased expenditure upon the transactions in 1895, is extremely satisfactory.

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## REPORT OF THE LIBRARY COMMITTEE OF THE HUNTERIAN SOCIETY.

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The Library Committee of the Hunterian Society met at the London Institution on February 7th, 1896, and inspected the books and book-cases. The Committee reports that the condition of both is very satisfactory, and it was pleased to notice the increased use that the Fellows had made of the Library during the past year.

The Committee suggested that the Council should make a definite yearly grant out of the Society's income in aid of the Library, instead of the quasi-accidental and varying grants now in vogue.

FRED. J. SMITH.

ARTHUR T. DAVIES, *Hon. Librarian.*

## REPORT OF THE AUDITORS TO THE COUNCIL.

After examining the list of Subscriptions for the year 1895, the Auditors note that sixteen Fellows are in arrear\* with their subscriptions, as against twenty-one Fellows in 1894.

The Auditors have examined and found correct all vouchers and the accounts of the Society, as kept by the Treasurer, and have duly signed the books accordingly. They report that the balance as shown by the bank pass-book agrees in amount with that shown in the Treasurer's account.

F. GORDON BROWN.

HOPE GRANT.

THOS. GLOVER LYON.

F. R. HUMPHREYS.

\* Since this Report was read the number has been reduced to seven.

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## BOOKS ADDED TO THE LIBRARY OF THE HUNTERIAN SOCIETY,

FEBRUARY, 1895, TO FEBRUARY, 1896.

PRESENTED :—

Clinical Society's Transactions, Vol. XXVIII.

Pathological Society's Transactions.

St. Bartholomew's Hospital Reports, 1894.

Middlesex Hospital Reports, 1894.

Guy's Hospital Reports, 1894.

Index Catalogue of the Library of the Surgeon-General's Office,  
U.S.A. Army.—W-Zythus.

Hutchinson's Smaller Atlas of Clinical Illustrations.

Archives of Surgery, Vol. VII.

The Clinical Journal.

The Journal of Dental Science.

PURCHASED BY THE SOCIETY :—

The Parasites of Malarial Fever.—Marchiafava and Bynams, and  
Mamsbey.



## REGULATIONS FOR TRANSMISSION OF BOOKS TO FELLOWS FROM THE LIBRARY.

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1. A Fellow wishing a Library Book sent to him, may order the book by letter to the Assistant Librarian, enclosing six Stamps in pre-payment of carriage and packing.
2. The Library Attendant will pack and send Books to Fellows, enclosing the usual receipt form in each parcel with the books, and shall receive twopence for each packet so sent.
3. To prevent loss, in case of a Fellow forgetting to send back the receipt, the letter requesting the book to be sent shall be kept by the Assistant Librarian, and the Library Attendant shall keep a list of the books packed by him, and of Fellows to whom they have been sent.



# BALANCE SHEET FOR 1895.

## HUNTERIAN SOCIETY IN ACCOUNT WITH THE HON. TREASURER.

RECEIPTS.		EXPENDITURE.	
	£ s. d.		£ s. d.
By Balance from 1894 account . .	56 12 9	To Messrs. Headley for printing Annual Report, &c. . . . .	63 18 5
" Subscriptions:—		" Messrs. Vincent, Brook, and Co., for Lithographic Plate for Report . .	2 7 6
For 1895 . . . . .	85 1 0	" Guest at Annual Dinner . . . . .	2 10 6
Admissions . . . . .	13 13 0	" Subscription to New Sydenham Society <i>Lancet</i> . . . . .	1 1 0
Arrears . . . . .	17 17 0	" London Institution . . . . .	1 10 4
In advance . . . . .	8 8 0	" Refreshments at meetings . . . . .	30 0 0
	124 19 0	" Insurance of Library . . . . .	8 3 6
" Dividends on £316 0s. 7d. Goschens . .	8 8 0	" Disbursements of Hon. Secretaries, and Clerical Assistance . . . . .	1 0 0
		" Treasurer for Postage . . . . .	10 8 8
		" Cheque Book . . . . .	5 0 0
		" Collector, on account . . . . .	2 0 0
			1 5 10
		To Balance . . . . .	122 12 9
			67 7 0
			£189 19 9

We, the undersigned, having examined the foregoing accounts, together with the vouchers, find the balance due from the Treasurer to be £67 7s.  
The funded property of the Society remains at £316 0s. 7d.

January 21st, 1896.

F. GORDON BROWN,  
HOPE GRANT,  
THOS. GLOVER LYON,  
F. R. HUMPHREYS,

}
Auditors.



## THE ANNUAL ORATION.

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JOHN HUNTER AS A PHYSICIAN,

And his Relation to the Medical Societies of the last Century.

By G. NEWTON PITT, M.A., M.D., F.R.C.P.,

Assistant Physician to and Lecturer on Pathology at Guy's Hospital.

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MR. PRESIDENT AND GENTLEMEN,

It is with great diffidence that I venture to address you to-night on the subject of such a well-worn topic as that of the immortal Hunter. At first I had proposed instead, to deal with a recent question in Pathology, but having been fortunate enough to discover the Minute Books of the Guy's Physical Society of the last century, which were contemporaneous with, and, I found, frequently referred to Hunter, I thought it might not be without interest to bring before you some information with regard to the societies of his time. The chief incidents of his life have been so frequently detailed, that I do not propose to give any consecutive narrative, but rather to bring forward letters and details, some of which I have gathered from the manuscripts recently acquired by the College of Surgeons since the death of Mr. Hunter Baillie.

It is curious that as many as six different dates have been given, apparently on good authority, as Hunter's birthday. July 14th, the date given by Sir Everard Home in his oration, was only a printer's error for February 14th. This is the day which has always been celebrated by the College of Surgeons, because this is the day Hunter himself accepted as correct.

The College of Surgeons have recently received a small

Bible, which belonged, in the year 1735, to James Hunter, John's brother, as shown by an elaborately decorated page at the end of the book, which is ragged and dirty from constant use. The volume has been carefully rebound this century, and two new blank pages have been inserted at the beginning which contain the family record as given by Mr. Bailey in the B.M.J., December 14th, 1895. I am also indebted to Mr. Bailey for much other information, which he kindly placed at my disposal. The date is herein given as February 7th; the record was apparently written after Dr. Matthew Baillie's death in 1823, as this is filled in and the whole entry is in one handwriting.

Another record which also comes from the Baillie family is that given by Mr. D'Arcy Power in the B.M.J. of December 7th, 1895, from a note-book filled in after 1751, but before the death of Dr. William Hunter, where the date is given as February 9th, 1728. The evidence therefore shows that thesed ates are not contemporary records and probably arose from the same erroneous family tradition. The correct date is undoubtedly that given by the register of births, viz., February 13th, 1728.

John Hunter was the youngest of a family of ten; his father lived on a small estate at Long Calderwood, eight miles out of Glasgow. As is well known, he was spoilt by his mother and would do nothing but what he liked, and he liked to do neither reading nor writing, nor any kind of learning, but used to ramble about all day among the woods and hills looking for birds' nests, comparing their eggs and noting their peculiarities. His two elder brothers, William and James, attended the classes at the University of Glasgow. Mr. Holden, in his oration at the College of Surgeons, in 1891, showed that a John Hunter matriculated in 1745, and assumed that this was their brother. Dr. Finlayson, however, has, on further examination of the records, proved that this boy was the son of a Glasgow merchant, who was no relation to the others.

His sister Janet, who had refused one good match, married a Mr. Buchanan, who with some others had started a large timber yard in Glasgow, where they stacked not only the wood required for house-building, but also mahogany, walnut, and other woods for making furniture. It appears that at that time there were no upholsterers in Glasgow, and that the timber merchants used also to make bookcases, tables and wardrobes as required.



John, who was at this time about 17, went to stay with his sister ; being dexterous and of an enquiring mind he doubtless thoroughly enjoyed his visit, and very probably tried his hand with the tools and spent his time about the workshops. His sister, however, died before she had been married a year, and John returned home. Two years later, in 1748, he came up to London to his brother William who had already made a name as the best anatomist of the day.

Throughout Hunter's life malevolent people, such as Jesse Foot, used to speak of him as having been a carpenter or wheelwright, whereas there is no evidence in his family that it was ever intended to bring him up to either of these trades. Moreover it appears that this brother-in-law, hitherto described in Hunterian orations as a dissipated carpenter, was really a well-connected, handsome man with a fine voice, who was popular in society, although he spent all his means in entertainments instead of attending to his business. This, no doubt, was foolish and finally compelled him to make his living as precentor in a church, but when older, he married again a lady of good family with a fortune.

John's lack of education was probably due to his own character, and not to the lack of means of his parents.

William Hunter, was the first great teacher of anatomy in this country ; as a lecturer he was remarkable for the clearness of his argument, the wide range of his illustrations and the elegance of his diction. He was an acute observer, the possessor of a fine library and a most enthusiastic collector, who spared no expense to improve and extend his collections.

In 1748 he sent an invitation to John to come up to London when his aptitude was apparent as soon as he tried his hand at dissection. Not only so, but his determination and his enormous capacity for work developed rapidly and never ceased until his death half-a-century later, when he left behind him, as a perennial monument, the magnificent collection now in the College of Surgeons.

In 1759, he had a severe attack of pneumonia with indications of phthisis, the disease from which his brother James had recently died. Accordingly, he availed himself of an opportunity to go as Staff Surgeon with the Hodgson and Keppel Expedition to Belleisle, which sailed in 1761, and the following year he went with the army into Portugal. While there, he studied the coagulation of the blood, and the nature and treatment of gun-shot wounds. The treatment

then, as laid down by Ranby, was to lay open the external orifices and to probe the tracks. Hunter saw the beneficial results of leaving wounds alone, and he very soon differed from his colleagues, and adopted a line of treatment of his own. He put on a dry dressing whenever he could, and as far as possible, even in compound fractures, tried to get repair to go on under a scab. He showed that blood clot could organise and form reparative tissue. Such, however, was Hunter's caution that the results of his investigations were not published until a year after his death, 32 years later.

I give here, two letters written, at this time, to his brother William. The first shows the involved and obscure character of his sentences, but brings out that dogged determination which was so marked a feature in his character and the vigour with which he determined that however much his opponent, Mr. Maddox Cone, might try to obtain the ear of the Admiralty, he would still forestall him.

As he said many years later to one of his pupils, "Any man who will set about a business and do it as you have done, may do anything he pleases in London."

The second letter shows the distinguished position he at once made for himself, but, unfortunately, he was not friendly with his colleagues.

"DEAR BROTHER,

When I received your letter at Bellisle informing me that the Secretary at War had promised me the deputy directorship, I was in hopes of getting it ; and when I came to Lisbon Mr. Young told me I was the person. I had no sooner heard of this, than Mr. Maddox Cone (one of our surgeons) produces a warrint for the imploymnt, granted by my Lord Trelawley ; and at the same time Lord Loudon's promise that he should keep it. Upon inquiry, we were told by the Surgeon, that it was only granted conditionally, viz., if I came from Bellisle it was to have no effect, which shows they knew of my being appointed or approved of. From this declaration of the surgeons he was led to give up all pretensions to it ; and even to write Lord Loudon a letter to that effect, when Lord Loudon was asked what he chused to do he put us off till he saw Lord Trelawley. They met, but this meeting determined nothing ; only that the person should be appointed at home by the Secretary at War ; and he received advice of it from thence. Now as there has been so many promises of the surgeons to give it up, and that my Lord Trelawley allowed him to do it, but yet it is never done ; and my Lord Loudon leaving it to be done in London, makes me suspect that they want to cheat me out of it, because Lord Trelawley and the surgeon goes home in the same ship with this letter, and (most likely) will make immediate application to the Secretary at War for a warrant, which will



determine it at home (as they call it). This I suspect to be their drift, and I would, therefore, disappoint them by being beforehand with them. From what has happened in London concerning my being the person, I should suppose that I am looked upon there as the person that has it. If this is the case I should look upon it as an easy thing to get a warrant, or an acknowledgment from the War Office, that I am the person appointed ; now all this must be done before Lord Trelawley gets to London. If you could have time to wait upon Mr. Tyrwitt, Deputy Secretary at War and ask to see Mr. Young's return of those that were to act under him ; if Mr. Townsend has seen it, it proves he approved of me by his not contradicting it, and if has approved of it he cannot be against granting a warrant or fixing it for me. From what I can learn Lord Loudon would be my friend if he would appear in it. Mr. Young is my stance friend and does everything in power to serve me. I wish I could get it as it makes a vast difference with me here.

I am, dear Brother,

Yours

Lisbon, July 25, 1762."

"If we are ordered home, and a surgeon is to stay here, I propose staying (if there is any chance of another expedition), and if I do stay I propose applying for the deputy governorship, which is ten shillings a day, and if I get that I can give my prentice a place of five shillings a day, so that I can make it worth my while, this is my present plan. Thank God I have succeeded in everything that I have attempted, but my practice in gun-shot wounds has been in a great measure different from all others, so that I have the eyes of all upon me both on account of my supposed knowledge and method of treatment. My fellow creatures of the Hospital are a damned disagreeable set. The two heads are unfit for their employment as the devil was to reign in Heaven, but more of all this hereafter.

Bellisle, Sep. 28, 1761."

Hunter was a master in all the arts of injecting and displaying specimens, and nothing gave him a more exquisite delight than the successful dissection of some minute connecting thread between two nerves or vessels in a specimen. At work, every morning at dawn, he dissected away patiently for hours, and a greater part of the 14,000 specimens he left had been prepared by himself during the last 30 years of his life.

Yet we know that his far greater delight was to think over and meditate on the bearings of all these new facts he was discovering, and we learn from Clift that while he was working in the evening and late into the night, it was not at dissecting, but in thinking over and writing out his observations. Clift uses this as an argument to show the amount of MSS. Sir Everard Home must have burnt after Hunter's

death, as the notes of only three P.M.'s made after 1784 were returned by Home; and Clift asks where is all the work written out each night during those last years of his life?

Hunter, although a short man (only 5ft. 2in. according to Clift, who was nothing if not accurate), was uncommonly strong and active, very compactly made, and capable of the greatest bodily and mental exertion. Sharp's splendid engraving of Reynold's portrait has made his appearance in mature life familiar to all of us, while the recent present from the Baillie family, a portrait now hanging in the entrance hall of the College of Surgeons, enables us to realise his presentment as a young man, with his locks of light reddish hair, suggestive of the gout of his mature life.

When young he was active, frolicsome and boisterous, and as became the student of those days he often led the gods. He seems to have had a considerable sense of humour, which appears not infrequently in his notes and writings.

In 1771, as soon as his means allowed, he married Miss Home, to whom he had been engaged for some years. The following is the letter he wrote to his brother on the occasion of his marriage.

"MY DEAR WILLIAM,—To-morrow morning, at eight o'clock and at St. James' Church, I enter into the Holy State of Matrimony. As that is a ceremony which you are not particularly fond of, I will not make a point of having your company there. I propose going out of town for a few days, when I come to town I shall call upon you. Married or not married, ever yours,

Jermyn Street,  
Saturday morning."

JOHN HUNTER.

His wife was tall, handsome, and singularly attractive. She had a cultivated mind, particularly with regard to poetry and music, and acquired some celebrity for her receptions (in giving which her sister, Miss Home, who had a beautiful voice, was of assistance) where Madame d'Arblay, Lord Orford, Mrs. Elizabeth Carter, and Mrs. Montague might frequently be met. Mrs. Hunter was the author of "My mother bids me bind my hair," which was set to music by Haydn. She had her own carriage and footman, and gave her entertainments without troubling her husband, who was dreadfully bored by general conversation and, on one occasion at any rate, broke in on her entertainment and dismissed the company abruptly.

At his death he left his wife and children without any

provision, with the exception of the money ultimately realised by his museum, &c. ; but through the kind offices of Dr. Garthsore, Mrs. Hunter was appointed to take charge of two wealthy wards of his, in which post she received a handsome salary until her death.

Throughout his life he appears to have lived up to, and not infrequently beyond his income, as was the case all the six years Blizard lived with him.

Steadily Hunter's income from practice increased and his establishments developed accordingly ; in 1772 he bought two acres of land at Earl's Court, where he built a large house and kept a most miscellaneous collection of animals of all kinds. In 1783 he took the lease of another house in Leicester-square, where he erected a large museum and lecture rooms.

Hunter was very hospitable and frequently entertained his friends, opening his house to his medical acquaintances every Sunday evening. He himself was very temperate and for the last twenty years of his life only drank water.

Hunter opened his new museum to the medical profession in October, and to any nobleman or gentleman interested in such subjects, when they came to town in May.

An amusing story is told of the fright of a party of Esquimaux, who, in 1773, has been brought over by Cartwright from Labrador, and were entertained by Hunter to dinner. One of them, Attuiock, went out of the room by himself, but soon returned with such evident marks of terror, that it was thought he had met with some accident or had been insulted. He seized Mr. Cartwright by the hand, dragged him out to a room in the yard, where there stood a case containing many human bones. "Look there," said he with more horror and consternation than I had beheld in the face of man before, "Are those the bones of Esquimaux, whom Mr. Hunter has killed and eaten? Are we to be killed? Will he eat us and put our bones there?" The others became equally alarmed, until we roared with laughter and explained that they were the bones of our own people, who had been executed for certain crimes, and the bones were preserved so that Mr. Hunter might know better how to set the bones of the living, should they break them, which is not uncommon in a populous country.\*

An interesting MSS. of W. Clift's was found in 1872, when

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\* B.M.J., 1893 ; vol. 2, p. 85.



the Offices of the Company of African Merchants in Sierra Leone were being cleared out, but it is difficult to explain now how it got there. It has now been placed in the Library of the Faculty of Physicians and Surgeons at Glasgow, by Dr. J. Finlayson.

This paper gives some idea of the enormous establishment which Hunter latterly kept up, of the many large and perhaps reckless expenses in which he indulged, and of the great weakness he had for bargains of all kinds, *e.g.* a splendid but unfinished air-pump, and a grand chemical furnace belonging to the Earl of Bute, a magnificent turning lathe which had been made for the Duke of Cumberland, armour of all kinds, Chinese Josses, and nodding Mandarins were among his curios which were sold at Christie's. In 1792 it is stated that there were never fewer than fifty persons daily provided for at his expense, besides the house pupils who paid for their board. The family, including the six house pupils, amounted to ten, while Monsieur St. Aubyn, the draughtsman; Mr. Dupré, the secretary, and Mr. Walker, tutor to his son, lived with them. At the houses in Leicester Square, Castle Street and Earl's Court there were 23 servants, the remainder being composed of the carpenters, bricklayers, painters, farriers and printers, who were in constant work on his buildings and collections.

In the latter part of Hunter's life all the money he could obtain was spent upon his collections, and if he determined to have a specimen the cost was immaterial. He is said to have given £500 for the skeleton of the Irish giant O'Bryne, and at the sale of the anatomical preparations of Mr. Blackall, a young and very promising teacher of anatomy at Thavies Inn, who died of phthisis in 1781, we note that Hunter paid fifty guineas for a specimen of a double vagina and uterus. Although reckless and always in want of money, Hunter was extremely liberal to poor patients, and several instances of great generosity to his friends are recorded.\*

The reasons why John Hunter commands our admiration and regard have been so often set forth, that it might be thought they were many years ago exhausted, but so original was his work and the lines upon which he went that, even at the present day, there are many aspects worthy of study which have not hitherto been dealt with. His claims as a

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\* B.M.J., 1890; vol. 1, p. 738.

physiologist, as a naturalist, as an anatomist, as a pathologist have each in turn been the theme of orations both at the College of Surgeons and before this Society. The originality of his views, the power of marshalling innumerable facts to compel conclusions, the keen eye for fallacy, the marvellous patience required for his minute dissection have all been laid before you. We realise that he was the founder of the sciences of surgery, of biology and of dentistry when we read such an oration as that of Sir James Paget, when we read Owen's volumes on Hunter's Essays and Observations, and when we study the museum with his published and M.S. works.

I do not propose to refer to any of these familiar topics, which are still worthy of discussion and are by no means exhausted. I wish this evening to bring Hunter before you as a Physician, and to show that he really was in advance of his contemporaries in much of his knowledge on medical questions, and that by reason of his sound common sense, his treatment also was often superior.

In looking through Hunter's notes of cases we find accounts of apoplexy, hemiplegia, aphasia, asthma, ague, angina pectoris, lead colic, cerebral tumours, uraemia, indigestion, deafness, gout, syncope, writer's cramp, heart disease ; fever with enteric ulceration, doubtless typhoid ; cerebral abscess in association with middle ear disease, &c., clearly showing the very large number and the great variety of medical cases in which he was consulted. Specialism was non-existent in those days, and we know that later on, both Astley Cooper and Abernethy had a large medical practice superadded to their surgical. We must also bear in mind that in the last century medical and surgical cases were mixed together in the same wards and not separated as is now the case.

When we see the large amount of accurate and minute knowledge Hunter had accumulated about the heart and vessels, and the study he had devoted to the blood, it is not surprising to find he was interested in diseases of the heart, and that his opinion was sought for. We may select the following from his notes on cases of heart disease.\*

"Bulstrode even in childhood used, when excited, to become cyanosed. On exertion, severe palpitation ensued, he became black in the face, and was often several days

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\* Casebook ; vol. 5, p. 80.

before he recovered ; yet when he grew up he used to hunt and take violent exercise, which frequently led to most disastrous attacks. Sir George Baker and Dr. Herberden apparently looked upon the symptoms as due to spasms or nervousness, whilst I thought there was something wrong with the construction of the heart, and reversed the treatment which had been ordered. I advised he should rest, be bled gently, eat moderately, keep the body open and the mind easy." Ultimately he died œdematous. *P.M.*—We learn, *inter alia*, that the aortic valves were found to be shrivelled up and were thicker and harder than normal. The heart was enlarged.

Hunter then proceeds to discuss whether this enlargement was mechanical and due to the blood being thrown to and fro, which would give the heart extra work ; or whether it were due to a primary enlargement of the viscus, such as he had noticed in other cases. He also discusses whether the shrivelling of the aortic valves was congenital or the result of disease, and noted that if so, it had developed much earlier in life than was usual.

We read of a man, aged 30, who had had palpitation since the age of 11. The symptoms are so violent that the bed-clothes can be seen to move ; the pulse is very irregular and the breathing difficult ; from the description of the inspection it appears that there was acute pericarditis with aortic incompetence. He then discusses the question as to whether we ought to attribute the symptoms to the increased size of the heart or to the disease of the aortic valves, and again notes how early in life this disease may come on. These observations are of the greatest interest because they show that Hunter realised from the symptoms that the organ at fault was the heart, and that there was some structural lesion ; and he evidently was clear that the depressing and violent treatment generally adopted was injurious ; the sensible advice he gave could not be improved upon at the present time.

In both the diagnosis and the treatment of many medical cases, he appears to have been ahead of the leaders of the College of Physicians. It is remarkable that although he was aware that the heart sounds sometimes produced thrills, which were audible and also that the heart increased in size and could move the whole chest, it did not occur to him, when he examined his patients, to listen to the sounds of the heart or to attempt to determine its size.



He was called to see a girl, aet. 16, who had had a fever followed by palpitation. The pulsation of the heart was forcible and expansive, and the carotids beat violently. There was a strong thrill in the impulse between the fifth and sixth spaces. She had attacks in which the fingers, etc. became cyanosed. The palpitation was so strong that it could be easily heard by others and still more by herself.

Girl, aet. 13, with heart disease. She had orthopnoea with violent pulsation, a sallow complexion, abdominal pain, cough, dyspnoea and oedema of the legs. Dr. Matthews, my colleague at St. George's Hospital, could not make anything of the case, and only wished to remove her more pressing symptoms. He ordered her to be cupped and scarified for her palpitation. The tension and pain in the abdomen he in some degree attributed to ascites and ordered her *Haust. Salin. cum aceto Destill. t.d.s.* And lest worms should have any share in her present complaints, he ordered her to be purged, twice a week, with *Pulv. Basilic gr. XV.*, and *Pulv. Jalapae gr. V.* Hunter sily remarks, 'she nevertheless steadily became worse and died.'

There is no evidence that in Hunter's time physicians in England recognised or diagnosed lesions of the heart. Taking, *e.g.*, the first lines of the practice of Physick by Cullen, the subject is never hinted at in his four volumes, except under the heading 'Palpitation,' where there are a few vague generalities, but not the slightest attempt at diagnosis as to the cause. Nor in E. G. Clarke's *Modern Practice of Physic* is there any hint as to the possibility of organic disease of the heart. Now I have shown that Hunter had diagnosed structural disease of the heart, that he had suspected it in other cases, had thought over the causation of the increased action and size of the heart, and realised that incompetence of the valves was a sufficient cause, but was puzzled by those cases of large heart, which he had not infrequently met with, the cause of which was not apparent, but which were probably due to the kidney lesions, which he, as all his contemporaries, had overlooked. His treatment was sensible and characteristic, viz., rest, laxatives, and gentle bleeding; these certainly could do no harm, and were the antithesis of that of the Physicians of the time, who recommended vigorous exercise, or of his colleague, who acknowledged he could make nothing out of a case, but to make up for this was extremely vigorous in his treatment. It is clear from many

of his notes that he frequently realized that the heart was the organ which was at fault.

His notes on a patient, Boyde, whose sight failed suddenly, are most acute, and his description of Cheyne Stokes' respiration is one of the earliest. The patient probably was uraemic. He says "he was sensible enough to pay attention to immediate impressions and gave sensible answers to questions, but quickly relapsed into a dose. His breathing was peculiar, he would breathe for 10 to 30 seconds, and then begin to breathe softly, which increased until he breathed extremely strong or rather with violent strength, which gradually died away till we could not observe that he breathed at all. There was a kind of stare in his eyes, and although he could not see, yet the pupils were not dilated; therefore I suspected that he did see, but from all the trials I could make, it was plain he did not, nor did they water by varying the light." This shows careful observation, and he was obviously familiar with the fact that usually when patients are blind, the pupils are dilated.

He refers in his notes to the following cases of nervous disease, which show that he was familiar with the paralysis of one side of the body due to a cerebral lesion on the opposite side, and at once was struck by a case contradicting this rule. He realised that a case of aphasia without paralysis was probably due to apoplexy. He drew a distinction between the paralysis of voluntary and involuntary muscles and distinguished between paralysis and anaesthesia.

*Apoplexy*.—"Lord Weymouth's servant had a fit which deprived him of his senses; he recovered with right hemiplegia and died two days later in another fit. An extravasation of blood was found over the right side of the cerebellum beneath the pia. The paralysis was on the same side as the injury.

Why were there two attacks due to the same cause and only the same parts affected? Why was not the first continuous with the last attack?"

*Aphasia*.—A man, aet. 59, a drunkard, was seized with a violent pain on the left side of his forehead and down the cheek, with total loss of memory and of the meaning of sounds or names of things. The pain and the loss of meaning of sounds were at first the only things that the mind was sensible of. I imagined the case to be one of apoplexy. Two hours later he became comatose and died after six hours.

*P.M.*—I found haemorrhage on the surface of the brain : it then immediately struck me that the trepan might have cured him. On cutting off the upper half of the brain I found a cavity which communicated with the ventricle : both ventricles also contained blood, yet there had been nothing like paralysis or hemiplegia.

W. Sharp, aet. 65, had loss of power in the voluntary muscles, but not in the involuntary. The arm was worse than the leg, but he had not lost the sensation of the skin, although he did not know when he made water or went to stool.\*

Hunter noted that the acute symptoms of cerebral tumours may be the result of chronic disease.

In a case of cerebral tumour in the Earl of Haddington's son. After giving the symptoms, which were of very short duration, he says : ' It is astonishing that it did not produce earlier effects. The symptoms were constant and increased regularly from the first till death. This case shows that the brain can suffer very much mechanically before its uses and actions suffer ; but when it comes to that period, when the brain is become affected, why the course should be so quick is not easily accounted for.'

It would appear that to say that a patient had palsy summed up all that was to be known and more than most people could be expected to discover, if we may judge by the vagueness of the ideas generally held at this time.

' Dr. Pitcairn was called in to see a patient who was found in the morning in her bed, without motion and speechless. He called the disease palsy, but from her then apparent situation, it seems to others that the attack bore more the resemblance of apoplexy.'

Minute and careful physical examination of a patient was, as we are aware, not practised in the last century, yet what can be more thorough and careful than the following description of an abdominal tumour ?

P. 107. Boy, aged 10, with a congenital stenosis ani. " His belly was found to be swollen, and there was a hard mass in the interior, whose limits above were very sharply defined. It reached higher than the navel, and came nearly as high as the sternum, but terminated above at once, which, in some degree, determined it not to be the liver. It receded when he was laid on his back, and returned when the parietes

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\* Casebook ; vol. 1, p. 53.



came in contact with the tumour. This showed that it was not in the abdominal muscles nor did it adhere to the peritoneum, but belonged to the contents of the abdomen. I conjectured it was the epiploon, become scirrhus ; or, perhaps, some mesenteric glands. But I also supposed that if it was the last, his constitution at large would be much worse than it was."

The tumour ultimately turned out to be of faecal origin. Hunter remarks : This is the first time I have ever felt faeces through the parietes similar to a circumscribed tumour, and it shows that we should be attentive to a variety of circumstances in many diseases, before we form an opinion of its nature.

We note with interest that Sir Joshua Reynolds, who died with hypertrophis cirrhosis of the liver, was attended in his last illness by Hunter, Sir George Baker, and Mr. Home.

Hunter himself was evidently a victim to migraine. (Case book Vol i, p. 121). He says: "At certain intervals, perhaps of two or three months, I feel a remarkable dazzling or convulsive motion of the eyes ; when this happens, besides the external visible object, there seems to dance before me somehow internally a kind of vibratory and undulating collection of rays, somewhat like the representation of lightning in prints."

We may, not unreasonably, take the observations upon his own illnesses as having been mainly made by himself. After a series of attacks of gout each spring for some years, in 1773 he had an attack of colic (very probably hepatic colic, as stones were present *P.M.*) with great cardiac failure. From 1785 onwards he suffered with anginal attacks brought on by the slightest exertion and in many cases associated with flatulence. From a remark in one of his papers, there can be little doubt that he had inoculated himself with syphilis on the finger ; and this may probably help to explain some of his later illnesses. In December, 1789, he had a typical attack of aphasia, with total loss of memory, due to some vascular failure. He did not know in what part of the town he was, not even the name of the street when told it, nor where his own house was ; he had not a conception of any place existing beyond the room he was in, and yet was perfectly conscious of the loss of memory. He was sensible of all impressions of all kinds from the senses, and therefore looked out of window, although rather dark, to see if he could be made sensible of the situation of the

house. The loss of memory gradually wore off, and in less than half-an-hour his memory was perfectly recovered.

Two weeks later he had severe vertigo, with photophobia, and perpendiculars appeared to him to lean to the left, making an angle of sixty; objects appeared too small, and he misjudged distances. He complained of noises in his right ear and suffered severely with insomnia. Nothing appeared to relieve him until he took a tumblerful of hot water every night, just before going to bed. This gave him a good night's rest. He became so much impressed with the value of this, that he frequently prescribed it for patients with irritable stomachs, and with the greatest success. It is clear that the first boom of the hot water cure was not during the present generation.

He never recovered from this obliquity of vision: his memory evidently remained impaired. His anginal attacks recurred more frequently, and even the act of undressing at night always brought them on. They also came on in the middle of the night, and on the least exertion in conversation, for example, at dinner; hence he was obliged to avoid dining in large company. His own explanation of his ocular symptoms was, that they were due to the spasms of the superior oblique on one side and of the inferior oblique on the opposite. It is much more probable that he had paralysis of the left inferior oblique, for example, and that the diplopia was not recognised. Post mortem the coronary arteries were calcified so that they were with difficulty divided by a knife. The mitral valves were ossified, and formed an imperfect bony margin, consequently the orifice must have been stenosed.

The aortic valves were incompetent and there was an aneurism of the ascending part of the aorta. The internal carotid and vertebral arteries were calcified, and their branches had opaque white spots on them. At that time the existence of cerebral softening was not recognised, probably owing to the late stage at which inspections were made; but possibly a small patch may have been present.

His observations upon opening dead bodies are of interest, if merely to show what lesions they recognised. He says, after giving useful directions, "examine the kidneys and gall bladder for calculi, the spinal cord in case there is a hæmorrhage in it, and the base of the skull for an aneurism of the internal carotid." He divided the symphysis pubis in order to obtain more room to take out the pelvic viscera,

an excellent custom even now by no means common.

The following passages are both for power of observation and for sound common sense without an equal among the medical writings of his contemporaries in England : \*

“The first and great requisite for the restoration of injured parts is rest. When a man has suffered a concussion of the brain, and perhaps a blood vessel has given way, the mind is deranged, becoming either defective or too acute ; and if these symptoms should continue a little while, the medical assistant applies blisters to remove the effect, either forgetting or not rightly judging the cause. This is even carried further : we hardly see a man taken with all the signs of an apoplexy where a paralysis in some part takes place, or a hemiplegia, but that he is immediately attacked with cordials, stimulants, electricity, etc. Upon a supposition that it is nervous debility, etc. the poor body is also tortured, because it cannot act, the brain not being in a condition to influence the voluntary muscles ; we might with exactly the same propriety stimulate the fingers when their muscles were torn to pieces. I must own I never saw one of them which had not an extravasation of blood in the brain when opened, excepting one, who died of a gouty affection of the brain, with symptoms similar to apoplexy. For many years I have been particularly attentive to those who have been attacked with a paralytic stroke forming a hemiplegia. I have watched them while alive, that I might have an opportunity to open them when dead ; and in all I have found an injury done to the brain, in consequence of the extravasation of blood. I have examined them in all stages ; when it was recent, some of weeks’ standing, others of months’, and a few of years’, in which I saw the progress of reparation.”\*

“When young men of fifteen have gout, which they are said to have inherited from their father,” Hunter shrewdly remarks that “most people who have had the gout richly deserved it, and the children had inherited the disposition for the way of living as well as the susceptibility for the disease, and were, therefore, more liable to fall into the disease than children at large.”

When Hunter was young all that had been written by men of great ability on Surgery was in Latin. Probably when his health broke down in 1755, and it was necessary for him to go and live in the country for a time, he thought it would

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\* Hunter’s Works ; vol. 3, p. 261.



be a good opportunity to enter as a gentleman Commoner at St. Mary's Hall, Oxford, with which College Dr. Pitcairn, a friend of his brother, was connected, this being the only way anyone who was ignorant of Latin could enter; and thus attempt to acquire some knowledge of the language. It is clear that he remained less than two months, and, so far as is known, never made the slightest effort later to learn Latin. Whether this was the sole reason is uncertain, but Hunter did not read or take any interest in the literature of his subjects, and practically ignored what was published by others, but the effect on his character was extraordinary; it induced him to find out everything for himself, invariably to experiment and accumulate the facts bearing on each question, and never to guess nor to waste time in hunting to find out what other people thought.

Given such capacity as he had, coupled with untiring industry, working from daylight till dusk, and writing out his notes at night, he soon developed such a stock of sound information as to contrast strangely with the mystic and vague hypotheses and traditions, on which he found the majority of the medical profession acted. This induced in him somewhat of a contempt for others, and we learn that even at Belleisle he did not get on well with his colleagues and was pursuing a line of his own in treatment, which, judging by the interest which was taken in it by others, was very successful.

These habits grew upon him and it is not difficult to realise how sore his colleagues at St. George's were with him at the time of the quarrel which they had in 1792 and '93 with regard to the question of Hunter's teaching surgery.

"On the subject of lectures," they say, "if they had been practical and contained principles and rules founded upon judgment and experience, with regard to the authority of others as well as our own, they would have been highly useful; if on the contrary they had leaned to physiology and experiment, with a contempt for all other opinions but their own, they would have been pernicious. The good, therefore, arising from lectures, unless under certain regulations, must be at least problematical."\*

This characteristic also became very marked in the greatest of Hunter's pupils, viz., Sir Astley Cooper. Throughout his life and in all his publications he pays no attention to the

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\* Lancet, 1888; vol. 2, p. 642.

results of other authors or surgeons, but simply confines himself to his own personal experience.

Previous to the last century surgery was an art or mystery, but not a profession, and it was only when men like Wiseman and Cheselden showed by their more accurate knowledge of anatomy, and of the minute details of surgery that they were superior to the graduates of medicine in the cure of surgical complaints, that the surgeons were able to displace the physicians, although the College of Physicians by their charter still confer the right to perform surgical operations. The teachers of anatomy, however, were still physicians, the best being Dr. William Hunter in the middle of the century. Pott, Sharp and Warner were the three great teachers of surgery. They confined themselves to records of cases, and neglected altogether the principles and processes of disease and repair, yet they did much for the education of the rising generation. After Hunter's time, however, the education of surgeons was no longer confined to acquiring a knowledge of the structure of the human body, and of the operations which may be safely performed upon it, but included a knowledge of the laws which underlie the vital processes in disease, and of the methods by which repair takes place in the animal economy.

Hunter soon realised that this necessitated a thorough knowledge of the processes which take place normally, and that the same general laws apply throughout the animal kingdom. He also discovered that the corresponding organs varied in different animals, and on collecting and thinking over a large number, he found out that there was a reason for every variation, and that the structure of every organ, and every abnormality was due to a definite cause and not to mere chance. In other words, that a change in structure implied a change in function. He then set to work by systematic experiment and by examination of every variety of animal to determine the underlying laws.

He elevated surgery to a science, so that the class of men and the social status of the profession at once improved ; moreover the surgeons soon became the chief anatomists.

The social elevation of the surgeon from the position he held in the last century dates from the time of the permeation of Hunter's influence through the whole of the medical education in London, and how great that influence was I shall show when I come to deal with the Medical Societies.

Hence it is not without justification that Dr. Billings in his classification of all Surgical literature, as given in the Index Catalogue, divides it into two periods, that before, and that after Hunter, taking 1780 as his point of division.

I do not know that Hunter's accuracy and determination were ever more splendidly shown than when he was called upon to give evidence in the trial of Captain Donellan for the murder of his brother-in-law. Sir Theodosius Boughton died half-an-hour after a purgative draught, with which it was supposed the accused had mixed some laurel water, the odour of which was noticed by the mother at the time. The body was disinterred ten days after death, and, as was too common, only some of the organs were examined, the brain and intestines not being investigated.

Four medical witnesses declared from the symptoms and *P.M.* appearances that death had resulted from poisoning by laurel water.

Hunter declared that all the appearances described could be *post mortem* changes, and that the symptoms were compatible with epilepsy or apoplexy, which an examination of the brain might have decided. If he knew that the draught was poisonous, he would probably say that the symptoms were due to it, but on the evidence before him it was impossible to give a decided opinion as to the cause of death.

The Judge ridiculed such caution, was sarcastic, and set his evidence on one side, with the result that the Captain was found guilty and executed.

From other circumstantial evidence, it is very probable that the man had been poisoned in the manner suggested, but Hunter was quite right in refusing to give a positive opinion, and there certainly was not sufficient evidence to justify a conviction. He clearly pointed out other possible causes of sudden death in a young and apparently healthy man.

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The remaining portion of the Oration, which dealt with the history of the Medical Societies in the last century and their relation to Hunter, is published in the *Lancet*, 1896, Vol. I.



# HUNTERIAN SOCIETY.

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FEBRUARY 27th, 1895.

PROFESSOR CLIFFORD ALLBUTT delivered the first Hunterian Society's Lecture, entitled :—

## SENILE PLETHORA OR HIGH ARTERIAL PRESSURE IN ELDERLY PERSONS.

The purpose of my address this evening will be better set forth to you, in the first instance, by the relation of a few illustrative cases than by a more abstract discussion of the meaning of its title. When by means of these cases I have sufficiently expounded my text it will be easy to enter into a closer argument.

The first case of the kind I have to consider came under my care about fifteen years ago.

Mrs. A., whose age was then about sixty-five, was one of the earliest friends of my childhood. Childless herself, but of a bright and elastic temperament, she loved to gather young people about her in her hospitable home. Anything morbid, anything melancholic or apprehensive seemed wholly alien from her character ; and her health was uniformly excellent. I was surprised, therefore, when, after many years of separation in the world she consulted me, to hear that she was the prey of the very melancholies, the very black clouds of the spirits which seemed least consistent with her temperament.

Older I expected to see her, but she had not changed in this respect only ; she was sallow, somewhat fallen in flesh, and the expression of her face, once so blithe and alert, was

dull, anxious and despondent. She told me she had been ill for three or four years—ill with symptoms obscure in so far as any particular parts or organs were concerned, but obvious and miserable enough otherwise ; she was sluggish, sleepless, wretched on awaking of a morning, at times almost suicidal.

On feeling her pulse I perceived it to be hard—very hard, and sustained and slow. Impressed at that time by the teaching of a physician once the friend of many of us—the late Dr. Mahomed—I not only noted this pulse, but was prepared also to find some changes in the urine, such as albuminuria or the changes alleged to be antecedent to it. The urine, however, much to my surprise, was perfectly normal in all respects and the uric contents of full standard. (I have no note of its quantities.) The heart was rather large, the apex beat heaving, and the second sound exaggerated far beyond the due allowance made for its distinctness in women.

Such a case was then quite new to me, but the line of treatment seemed obvious—namely, to use means to diminish arterial blood pressure. To be brief, I dieted her, gave her mercurial and other laxatives and iodide of potassium, and sent her to Carlsbad in the summer. She completely recovered her health and spirits, and the pulse lost, or lost for the most part, its abnormal characters ; the heart, moreover, seemed to return in a few weeks to normal dimensions. The symptoms recurred from time to time ; at first with some insistence, afterwards with less tenacity : but on my instructions she became her own physician, and kept her health until she died in old age of some accidental disease which did not come under my observation.

When in this case the blood pressure had been reduced, I was better able to estimate the probable effects of the stress on the arterial coats ; so far as I could judge the arterial coats had undergone far less strain than might have been anticipated. The artery, emptied under the finger, would naturally at her age be somewhat unduly perceptible, but there was little elongation or locomotion ; nor was there any

evidence of dilatation of the aorta. Mapping of the heart's area in elderly ladies is no easy task. There was, I believe, some history of gout in Mrs. A's family, but none in herself.

It is convenient to speak next of a lady, Mrs. B., who for two years\* has been and still is under my care. This lady is now about 80 years of age, but, save for that earliness of fatigue one sees in old persons, she is at this moment in excellent health. As is usual in persons who inherit longevity, there is in her little evidence of general cardiovascular degeneration. When about two and a half years ago I first saw her she had been suffering for some time from so-called "dyspepsia," insomnia, and nervous perturbations. Both on her own side of the house and on her husband's side she had lived continually in the society of persons of great intellectual distinction; her own mental endowments are considerable, and in temperament she is a person of unusual calmness and decision. Yet on my first visit to her I could not but recognise some of the classical symptoms of hysteria, and especially those storms of flatulence—the phases of violent and incessant eructation of inoffensive air—so characteristic of some kinds of "hysteria." No longer mistress of herself, no longer under the control of a shrewd and kindly humour, she was irritable, depressed, apprehensive, restless and sleepless. For the sleeplessness some mild sedatives had been taken, but we found that her symptoms were in no way, or but little due to drugs.

Her pulse revealed at once that high arterial blood pressure was present; the heart's action was laboured but not very slow, and the aortic valve sound very thudding.

I was much gratified to find how easily in a patient of such advanced years the blood pressure was reduced by the usual means, and how little harm seemed to have resulted from a condition which had presumably persisted for some time; her "nervous" distress had resisted long courses of the usual "nervine tonics and restoratives"—perhaps for a couple of years previously. I had some fear at first lest the

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\*Now four years, April, 1896.



relief of the symptoms and the fall of blood pressure should prove but a mere coincidence in time.

Little doubt, however, now remains in my mind. I have seen Mrs. B. on many subsequent occasions and have been able to keep her in excellent health by watching the blood pressure. The old symptoms recur from time to time (say every four to six months) ; as under such circumstance I find the pulse hardening, I administer salines, iodide of potassium and an occasional mercurial pill ; these measures nip the disease in the bud, and with the exception of these brief recurrent threatenings, which recur with less and less tenacity and at lengthening intervals, her health is now continuously good. Mrs. B. has more than once said to me that, instead of failing, her health seems to be better than it has been for some years past. Sir W. Gull once said well, "there is no tonic for old persons like sulphate of magnesia." In this patient's urine there was never any trace of albumen ; a little sugar appeared occasionally in the first and in one or two of the later attacks ; to this, however, I did not find it necessary to attach much importance.

The third case, that of Mrs. C., was a very instructive one. It is remarkable that these cases seem to occur more commonly in women—it may be from constipation and want of exercise. Mrs. C. also was advanced in years—some 68 years of age, I believe—and was said, truly enough, to be suffering from heart disease. I found her likewise in a peculiarly nervous state, rather more marked than one would attribute directly to the disorder of the circulation. Orthopnoea and considerable oedema of the feet and ankles were present ; but the liver was not enlarged, the urine was not albuminous, nor were the lungs oedematous.

Expecting, at first sight, in spite of the sallow pallor of her face, to find a "mitral pulse," I was amazed when I put my finger on the tightest radial artery I think I ever felt. Although there was certainly some venous obstruction the arterial pressure was incalculably higher. The apex was displaced outwards and downwards, the left ventricle was hypertrophied and dilated. A broad heaving slow action of

the organ indicated the heavy stress under which it was working. It seemed clear that the left ventricle never emptied itself, or nearly so, in spite of its labour ; and that the venous arrest was quite a secondary matter.

I think on my first visit there was a systolic murmur at the apex, but if so it was transient as the case was marked almost throughout—as my medical colleague had likewise found—by an absence of murmur or other evidence of valvular lesion. For an indefinite time this lady's heart had been supporting an increasing arterial pressure, and at the time of our consultation the sturdy left ventricle was beginning to give way.

I repeat that I felt in this case perhaps the very hardest and most sustained pulse I ever came across ; and, as a consequence no doubt of this arterial pressure, the patient had been suffering for a year or two from attacks of a very unusual kind which for lack of a better name I called larval apoplexies. These attacks had been rarely witnessed by her medical attendant, never indeed witnessed in their fullness ; they lasted but fifteen or twenty minutes, if so much, and on his arrival had always passed their height. And it was very difficult to obtain any definite description of them from her friends, intelligent as they were.

The attacks seemed to begin with a sense of fulness and oppression, of a labouring circulation and of throbbing in the arteries of the neck and head ; she then became “unconscious” and unconscious she would remain for some seconds or for a few minutes. Curiously enough her husband had died of angina pectoris (after suffering for twenty years from this disease in an exemplary form), and although the widow had no pain, no syncope and no sense of dissolution, yet her family and medical man supposed that a kind of angina pectoris was present in her case also. I could obtain no valuable record of the pulse during an attack.

To me the description seemed rather to indicate an apoplexia sine hæmorrhagia—a high pressure within the cranial cavity. The attacks were by no means syncopic, and

were very different from the attacks which took their place at a later date when the left ventricle began to fail. I could not ascertain whether the respiration became definitely tidal. I suspect it did; at any rate it became laboured. The subsequent events were as follows:—We agreed at once to give up “supporting measures,” digitalis and so forth, and to reduce the blood pressure by all possible means. We gave mercury (the urine was normal in all respects), in occasional doses, and iodide of potassium in regular and increasing doses; we gave also frequent and severe laxative salines, and we cut off all beef-tea, essences and the like. Nitroglycerine was also administered; frequently at first, afterwards more rarely.

The immediate results were very satisfactory; the “attacks” diminished in number and severity until they ceased, and the patient recovered a great measure of comfort and amelioration—so much so that I did not see her for an interval of many months. All or nearly all symptoms of arrest on the venous side cleared up quickly, and did not return until the closing period of her life. There was no history of gout, family or personal in this case; nor any definite sign of it.

It was not easy, however, to keep the blood pressure low on the arterial side. Instead of yielding at once and over and over again to appropriate remedies, it gave way slowly, was never wholly reduced, and tended on any relaxation of active measures to return. It was indeed difficult to reduce the blood pressure without unduly reducing the bodily strength also, although the patient and her friends welcomed the relief obtained by reducing agents, and even by purgation, which at one time had proved somewhat excessive. We decided not to bleed her for reasons, perhaps, not wholly scientific. Under such circumstances I saw Mrs. C. from time to time, and helped to steer the middle course; after a time, however, evidences of dilatation of the left ventricle set in more definitely, blood pressure began to fall ominously enough without reducing agents,



the aid of digitalis had to be sought, and death occurred with the usual signs of asystole.

The fourth case which I have before me is that of Miss D. This lady is living and is of about 80 years of age; her arteries are now thickened and elongated, and her heart enlarged. Her health, however, is good enough, at any rate so far as concerns our present enquiry. During the last fifteen years Miss D. has been liable to attacks which, to speak strictly, are melancholia, though her friends have not been called upon to realise the presence of definite mental disease. Fits of fretful and peevish depression have possessed her from time to time not unaccompanied by delusions—delusions of poverty or of sinfulness—or by vague apprehensions and magnified worries. These attacks of low spirits were always attended by high arterial pressure, and yielded slowly to mercurials, certain mineral waters at home and abroad, and other deobstruents. In this case, as in that which follows, there was a distinct personal history of gout in the form of one or two mild attacks of podagra. The arterial disease is of more recent origin.

The four cases which I have read are cases in which the symptoms I would describe were well marked; they are also cases which I had the opportunity of watching and of helping to treat throughout, and in which the patients were, so far as I could judge, quite free from any sign of local disease of ordinary kinds. In the course of consulting practice I have seen many more cases which apparently belonged to the same class; but I refrain from reference to those which I saw but rarely, perhaps but once only; and of the issues of which I can give no final account. I will bring forward, however, two more cases which, although somewhat different in symptoms, seemed to me to be of the same kind.

Dr. E., a medical man of good fortune, of gouty habit if not actually podagrous, over sixty years of age, but full of energy, an active sportsman and always ready for a glass of good wine, consulted me on account of symptoms which he feared might pertain to angina pectoris. He was an ardent

fisher of salmon, and on wielding the heavy rod of the craft he would become aware of a sub-sternal tightness—perhaps a pain—certainly a sense of oppression, which would almost compel him to drop the rod, or even at times to lie down. The same sensation would recur on other occasions, but never so definitely as when engaged in some strong exercise of the arms. There was no sense of dissolution, his pulse at these moments seemed to himself an “excellent strong pulse,” and when he forced himself to disregard the uneasiness and continue his exercise the tightness would subside ; but, if it appeared at all which was by no means invariable, it would recur on exertion after any intervals of rest during that same day or morning.

On examination I found an extremely hard, sustained and slow pulse, a large heart and a thudding aortic valve ; the kidneys and other organs were healthy so far as could be ascertained. It was not easy to bring down his pride in the strength of his pulse, but, being on terms of intimate friendship with him, I gradually led him to submit to blue pill, Carlsbad waters and to considerable defalcations of diet.

Gradually he recovered his former health and activity, continued his practice for half-a-dozen more years and then retired to spend the rest of his days on the banks of a trout stream, where he lived happily till about the age of 78.

He found it necessary to continue the restrictions of diet, and to take from time to time a course of deobstruent medicine. During the last six months of his life he presented signs of cardiac dilatation and died of venous obstructions and dropsies within and without. Whether the left ventricle had received some permanent injury during the few years of unrecognised high arterial pressure, or whether this ventricle was subjected to the effects of more or less continuous high pressure during the last years of his life, I cannot say. Until his last illness I had not seen him for some years. In either case the mischievous results were long deferred. The urine was normal throughout his life, or rather until albumen appeared in the latter stages of the heart disease of which he died.

The last case shall be that of Mrs. F., who at a much earlier age—I think at about 46 or 47—described to me the same symptoms as those of my medical brother E. The sensations complained of and their causation were so nearly the same that I will not delay you by dwelling upon them in detail. I should say, however, that in her case as in that of Dr. E., I was not able to satisfy myself of any definite dilatation of the aorta, though I have no doubt that some dilatation existed, at any rate occasionally. In Mrs. F.'s case mental distress may have played some part as a factor of disease. A year or two before she sought my medical advice, her husband, a Yorkshire squire of large estate, had died somewhat suddenly, leaving her in widowhood and with heavy worldly and family cares. In her case only, of those narrated to-night, so far as I can tell, were these mental conditions in action, and I attribute no great weight to them, even in her ; it does not appear to me that mental distress, so efficient to produce granular kidney, is much concerned in producing the states I am now describing.

Mrs. F.'s case yielded pretty readily to appropriate remedies and diet ; and by attention to my directions she kept herself in health. Her health continued good for many years, indeed until last year, when she was carried off by a rapid outbreak of malignant disease. Fifteen years at least must have elapsed since Mrs. F. came first under my professional care.

I have now brought forward the evidence I proposed to bring in support of my opinion that in the middle and later stages of life men and women, and women perhaps more especially, are liable to a rise of the mean arterial blood pressure to an abnormal and even a high degree.

As Dr. Ewart has lately reminded us, these degrees cannot be measured by the instruments at our disposal ; and the evidence of rise and fall must as yet be that of our unassisted senses. I took many sphygmograms in these cases but they are destroyed, and I am satisfied to ask you to accept my clinical estimate of the state of the pulse for what it may be worth ; and also my opinion that the rise of



pressure in these cases is unaccompanied by any clinical evidence—so far as we have learned to recognise it—of disease of the kidneys or of any other organ, unless dilatation of the left ventricle of the heart be regarded as a disease. This dilatation may be but temporary, and permanently good health may be restored in cases in which the cardio-arterial stress has not been too long endured, as for example in the case of Mrs. C.

After a time—a time which must vary much with the severity of the stress and the resistance of the arterial system in the individual case—the strain begins to tell upon the integrity of the vessels and of the heart itself; as in the case of Mrs. C., irreparable harm may be done if the pressure be not reduced in a comparatively early stage of its appearance. But, as the case of Mrs. A. testifies, the arterial system may be submitted to a not inconsiderable stress for some time without suffering permanent injury. Hypertrophy of the left ventricle may be established for a time, and I think the aorta may be felt in the episternal notch, and yet the patient recover health and live his fair span of life thereafter, if the proper means be taken to reduce the blood pressure.

It was well shown in my illustrative cases of Mrs. A. and Mrs. B. that the symptoms of arterial hyperpiesis are often of a functional nervous character, such as melancholic or hysteriform states; a peculiar sense of fretfulness or restless apprehension seems characteristic of the malady. Whether these perturbations be prominent or not may depend upon temperament, and in my experience the more neurotic manifestations are more common in women, the more vascular in men. At the same time one is tempted to associate with these states the familiar depressions and irritabilities of gouty persons, male or female; and to speculate upon a community of nature in them.

Of this arterial plethora I have little to offer in the way of explanation. “Suppressed gout” of course is a ready opinion, but I cannot say that the term throws much light upon the phenomena. With the exception of Miss D. and Dr. E. I cannot say that any of the cases I have spoken

of this evening presented any clear evidence of articular gout either in person or ancestry. Of course everyone's "grandfather died of the gout," this kind of hearsay goes for little: podagra apart we are much in need of positive means of identification of the gouty variety of the human animal. Careful examination of the urine, with due regard to the hours of digestion, may give a vague impression of hyperacidity; urates may be abundant and even uric acid; but these phenomena are too commonly seen in indifferent cases to serve as guides to the diagnosis: on the other hand in many if not in the majority of cases of articular gout there is no evidence of high blood pressure. Polyuria, probably due directly to high arterial pressure, was present more or less at times in my cases; but it never became so profuse and troublesome as in the earlier stages of chronic Bright's disease. Quantitative computation of the solid contents of the urine were not systematically made in any of my cases, but I have no reason to believe that they were below the normal standard.

That the blood in senile plethora is at fault, primarily or secondarily, is probable; and that it may be altered in some way which leads to peripheral arteriolar contractions: beyond this at any rate I feel unable to proceed, indeed I venture so far with hesitation. "Renal inadequacy" may be alleged as the primary evil; such alleged inadequacy, however, save in cases of chronic renal disease which is not beyond our means of detection, has always appeared to me in the light of a convenient fiction; in any case the state of kidneys of my patients was consistent with subsequent good health.

It seems vaguely probable that the pathological events are allied to those of gout, and this probability is fortified by the cases D. and E.; but until we know the nature of gouty changes themselves we are explaining "incertum per incertius."

The satisfactory results of deobstruent treatment tempt me, as I have said, to regard the high pressure as due to arteriolar contraction, or at any rate to increase of friction in

the presence of some abnormal constituent of the blood ; we must not forget, however, that the capacity of the arterial system may be likewise diminished by direct nervous agencies ; such, for example, as in Waller's method (*Arch. f. Anat. u. Phys.* 1888) of exciting the spinal cord, which is followed by strong contraction of the periphery of the circulation on its arterial side, and rise of five mm. of mercury in the blood pressure within the left auricle—the left ventricle being unable to empty itself. In the presence of such alternatives as these we must not too readily attribute arterial hyperpiesis in the first instance to impurity of the blood. Still more carefully must we avoid the off-hand assurance that in “the great majority of cases of high arterial pressure in later life the kidneys tend to become granular.” This seems to be a kind of out-patient diagnosis—rough and ready. It is hard to say what is meant by a “tendency to become granular”—the kidneys are or are not in a state of disease however incipient, and of disease which is not only attended by present symptoms, such as low specific gravity of urine and more or less irregular albuminuria, and by acuter periods from time to time, but is also progressive however slow the rate may be. To-night I have purposely selected cases in which there was not renal disease, incipient or established ; cases which were watched for years. Mrs. B.'s is a more recent case, but in it repeated estimations have been made of urea which prove the kidneys to be sound, and in one or two of the other cases—in Mrs. A.'s case for example, the first of the kind I studied—the urinary solids were occasionally estimated in the expectation of a diagnosis of chronic Bright's disease.

It has been held, I believe, that high arterial pressure commonly results from “auditory” irritation ; this opinion I do not hold. I have not found such high pressure constant or even usual in cases which for the moment I may call by the vulgar name of “Menière's symptoms.” In three cases now under my care, cases in women of 53, 55 and 60 years of age respectively, I have taken careful note of the pulse both during vertiginous attacks and in the intervals. During



the attacks the pulse may slow a little and the pressure rise, but this is a momentary phase ; there is no persistent rise.

On the other hand, in persons whose arteries are thickened and tense, vertiginous symptoms may appear ; these, however, I conceive rather to be secondary and to arise from some change in or concerning the ear due to arterial disease therein, In order to concentrate our attention I have removed from my list all cases of primary cardio-arterial disease—of so-called atheroma—and all cases of paroxysmal vertigo which might be attributed to aural disorder.

By the way I may state that I believe vertigo—of any gravity—does not happen from mere hyperpiesis, not even if this advance to such a degree as to cause, or seem to cause, tidal or “Cheyne-Stokes” breathing. I remember attending a case in Bradford in which very high blood pressure, in a man of about 50 years of age, heavily engaged in business, was attended with slightly maniacal wilfulness, delirium, stuporose states and tidal breathing. I have never seen Cheyne-Stokes breathing so well marked as during the worst three days of this alarming illness ; but on free mercurial and saline purgation and some local blood letting, the patient made an excellent recovery and was very active and well when I last heard of him. Whether, as Professor Leyden, Professor Horsley and Mr. Leonard Hill have suggested in like case, high arterial pressure acting upon the intra-cranial contents was especially felt by the respiratory centre, I must leave to later observation to decide. The pulse is certainly retarded in nearly all these cases.

In some of my later cases—as for instance in the strongly marked case of Mrs. C.—I was able to verify the statement of Professor Roy and others that slow as the pulse may be the *duration of systole* is not lengthened ; although in anæmia it may be much shortened. Even to clamp large arteries in living animals does not prolong the act of systole. But, as Dr. Roy has clearly demonstrated, it ejects less blood ; that is, the quantity of residual blood is more. Thus dilatation, at first physiological and then, as stress causes strain,

pathological in degree is established ; and, as in Mrs. C., may go so far as to cause mitral regurgitation and raise venous pressure. Now, other things being equal, the velocity of the blood must be diminished proportionately to the resistance, and, as nutrition thus suffers, secondary morbid reactions will appear. I need scarcely say that I speak of the velocity of the blood itself ; the velocity of the pulse wave will be increased as the arterial walls become more rigid, an increase which may be ascertained by measuring the carotid-radial interval, on the methods recently described by Dr. Chapman and others. The chief work of the heart under normal circumstances is engaged in overcoming peripheral resistance ; I accept Dr. Chapman's figures when I say that, taking the velocity of the blood at 0.5 metres per second, but  $\frac{1}{200}$  of the whole heart work would be required for the circulation if friction be taken as nil. As Dr. Chapman observes, this is "a precious margin," and it seems improbable that if the heart be hypertrophied to meet an increase of peripheral resistance this margin will be fully preserved in the sum of the increase. Yet, if not, herein lies one of the conditions of ultimate failure ; another being no doubt the tensile and shearing strains to which the substance of the heart and larger vessels is subjected.

Hence, although I have learned from such cases as I have related to-night that the cardio-vascular apparatus will withstand a certain increase of peripheral friction, even for a duration of time to be measured by years ; and although experience seems to me to indicate that cardio-vascular degeneration is more often primary than secondary, yet, as the cases of Mrs. C. and Miss D. show to us, excessive tensile strain of long standing inflicts damage upon this apparatus (chiefly upon the left ventricle) which may prove irreparable in elderly persons. Yet In Mrs. C.'s case, extraordinary as the strain was, the arteries were not extensively or intensively atheromatous. Had Mrs. C. called upon me with a normal blood pressure to consult me concerning some malady relatively indifferent, I should not have pronounced her arteries to be aged much beyond her years. That her aorta,

however, was dilated and degenerated is likely enough.

I constantly read descriptions of cases in the Journals in which increased blood pressure and "atheromatous" arteries are regarded as two aspects of one malady. Medical writers often speak so vaguely that their meaning cannot be clearly apprehended ; but I gather from the various context that the process is supposed to consist primarily in a peripheral arteriolar degeneration, and secondarily and consequently in a raised mean blood pressure.

Now although such a process no doubt often comes about—for the diminished lumen and stiffer walls of the vessels necessarily raise blood pressure and increase the work of the heart—yet this is not the process to which I wish to direct your attention to-night. In the cases to which I refer the cardio-arterial system is not primarily diseased, so far as one can tell ; nor indeed does it show much alacrity in taking on disease, severe and prolonged as the stress may have been. On the other hand cases are abundant in which, although cardio-arterial degeneration—"atheroma" as I may call it for brevity's sake—is obvious, yet elevation of pressure is not at once obvious, even if present ; though, so long as the heart be fairly sound, it doubtless must be present.

"Atheroma," if I may again use for convenience a general term, is no doubt a disease of elderly persons, especially of elderly men ; apart from acquired syphilis and other poisons it is rare though far from unknown in young persons. But we cannot reverse the position and assume that all old men's arteries are atheromatous. Thirty years ago I opened the body of a man aged 84, a relative of my own, who died of an obscure malady which proved to be a gallstone abscess : educated as I had been in the doctrine or prejudice that all old men were atheromatous, I was amazed to find heart, valves and vessels all as sound and clean as in a healthy young man. Now this patient had been a man of enormous energy, both mental and physical ; and had suffered greatly, as such men often do, at the hands of fortune : few men, perhaps, had undergone more excitement, more physical unrest, or more "worry." From that somewhat remote day



to the present I have become more wary, and I need not say to this audience that such evidence of cardio-arterial soundness in old persons, especially in those who are of a long-lived stock, is no extraordinary phenomenon.

I repeat that in Senile Plethora, if this makeshift title be permitted me, the primary cause of the increase of the mean pressure is not morbid rigidity of arterial or arteriolar walls, or straitness of their calibre ; nor again curtailment of capillary areas. The primary event is no doubt an increase of peripheral friction, but it is rather of a dynamic than of a static kind ; and one which can be reduced or removed more or less permanently by medication. The cardio-arterial strain and disease, if any, are consequent ; and unless there be a disposition in the individual to cardio-arterial degeneration, or the strain be excessive both in time and degree, that consequent statical disease may be long in establishing itself. If I go on to say that the primary dynamic change is of the nature of gout, I shall not throw much light on the matter : it may be so : but we have then to ask how it is that so many gouty persons are free from this peripheral friction, from this secondary cardio-arterial stress ; and even from ordinary arterial hyperpiesis.

My own clinical observation indeed would lead me to say that in persons who have articular gout, high arterial pressure is not very remarkable ; \* certainly it is not the rule. On the other hand, I am disposed to think it is common in those who vaguely suspect themselves of goutiness, who are accused of it by their physicians, and who are of gouty kin. These persons probably present some allied catabolic abnormality ; whether dependent on stomach, gland, peripheral nutrition or nervous governance I cannot tell, but its effects are felt at the periphery in such a way

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\*In a paper by Dr. Mitchell Bruce which came under my notice after this lecture was written, the author says, "the sufferer from the gouty heart, has habitually no evidence of the pulse we associate with high tension" (address delivered to West Surrey Br. Brit. Med. Ass., Oct. 18th, 1894).

as to increase friction, and thus directly give rise to an increase of arterial pressure.

This increase may in its turn be the direct cause of some of the symptoms in certain cases ; it may be, perhaps, a direct cause of uneasiness by its effects on intra-cranial pressures ; of the latter kind I suggest that Mrs. C.'s attacks may be an example.

Surgeon-Lieutenant Johnson Smyth suggested a few months ago that the epilepsy of old age might be due to some consequences of an increase of density of the blood in old age. Dr. Smyth made the broad assertion that in old age as in youth this increase of density is a regular feature.

If this be the case increased peripheral resistance may be a consequence of increased density or connected with it. As the facts of the matter rest at present in great part on the recent researches of Dr. Lloyd Jones, I have put the matter to Dr. Jones, who tells me that in cases of cerebral hæmorrhage the density of the blood is invariably above the mean of apparently healthy people at the same age, but does not exceed the upper limit of variation in such people. In old people who end with œdema the density of the blood is below the mean. To which class the Senile epileptic belongs Dr. Jones cannot now tell.

However liable my Senile plethorics may be to apoplexy, this event did not occur in any of them — presumably because I have excluded all cases in which arterial disease was apparent. Be this as it may, Dr. Smyth is misinformed in respect of blood density in elderly persons. Dr. Lloyd Jones tells me that in old age the density of the blood tends rather to fall. Both his own researches and those of others indicate that the specific gravity of the blood is high at birth (1066 or so), falls speedily during early infancy (1045), and attains its minimum somewhere between the ages of six months and two to three years : thence a rise is observed, and finally, after 50 years of age, a fall.

As soon as an opportunity offers, however, I must ascertain the density of the blood in some cases of Senile plethora ; for the explanation of its causation must at first

be sought in same quality of the blood itself, whether it be discovered there or not. I regret to confess that I have done no more to-day than call the attention of observers to a class of cases which I have at present little opportunity of investigating.

Before concluding I have to consider some pages in the recent work of Dr. Balfour on the "Senile Heart." This book did not come into my possession until the present paper was written; had it done so I should have chosen some other subject on which to speak this evening.

Dr. Balfour describes, with fuller knowledge than I can offer, the symptom group which I have called Senile plethora; but he differs somewhat radically from Dr. Mitchell Bruce and myself in his interpretation of the effects of gout upon the arterial system: in Dr. Balfour's opinion gout always raises arterial blood pressure,—whether directly, as a clogging in the blood flow, or indirectly as a stiffener of the blood vessels he does not definitely say. But Dr. Balfour chiefly attributes rising arterial pressure in elderly persons to the obsolescence of capillaries step by step with arrest of growth and involution of the tissues they supply: thus the area of the distribution of the blood is diminished, its issue into the veins is proportionately prevented, and the current thus dammed back tells upon the larger arteries and left ventricle as increased stress. Dr. Balfour sees very clearly that even in old persons, as I have said, the heart is by no means always degenerate and is often quite ready to grow up to the new needs if the quantity and quality of its own blood-supply remain fairly good.

The difficulties, however, of accepting capillary obsolescence as the cause of increasing arterial pressure in the elderly, seem to me, as I have already hinted, to be manifold.

1. In cases of obvious arterial degeneration the blood pressure (if we distinguish between blood pressure and the resistance of less elastic vascular coats) is not always, nor very frequently, high, or no higher than the increased rigidity of the arterial walls requires.



2. A rise of arterial blood pressure is by no means constant in old people, nor especially manifest in those whose tissues seem more shrivelled than usual. Many shrivelled old people are very healthy, and their blood pressure moderate ; on the other hand in many of the plumper and rosier ones blood pressure rises.

3. The bulk of the blood mass in the arteries is not constant, nor anything like constant—even from hour to hour. The whole of the blood in the body can be held in the venous system, and in old persons can still quite readily betake itself thither with symptoms of collapse, as we know too well. Now, unless the output of the heart remain constant, the relation of a given capillary area to the circulating arterial blood is not constant.

4. The rise of arterial pressure which must necessarily ensue upon the temporary suppression of large areas under normal vasomotor reactions is but momentary, the readjustment of pressures, as Dr. L. Hill has shown, being very rapid indeed, almost instantaneous. It seems certain therefore that permanent exceptions of capillary areas would be promptly compensated.

5. In elderly persons the lie of the mass of the blood is more towards the venous system than in the young.

6. Whatever the causes may be the states are readily and persistently modified by simple courses of medicine which could not reopen obsolete vascular areas.

No doubt as men grow older they take less nervo-muscular exercise and yet are disposed to eat at least as much food as in former years : indeed a more regular life too often means a greater regularity of attendance at meals. If, as Dr. Balfour says, all surfeit due to such causes is gout, if gout be but a name for surfeit and have no more special quality about it, then high blood pressure due to surfeit may be gouty. But a comparison of gout in the young with gout in the old does not favour so simple a solution of the problem ; it indicates rather that gout is a specific morbid quality favoured no doubt but not directly caused by surfeit.

Dr. Mitchell Bruce is correct, I think, in saying that although the great secret of anti-gouty dietary is not to avoid this or to eat that, but to observe strict moderation in all things, yet that gout is not a direct cause of high arterial pressure, though often of course associated with it, and, I would add, in some cases conspiring to produce it.

That in its turn again Senile plethora is not always or generally due to relative excess in feeding is proved to my mind by the habitual moderation of many persons thus disturbed, and by the insufficiency of diet alone to govern its course.

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MARCH 13th, 1895.—Pathological Evening.

SACRAL TUMOURS.

*Specimens shown by Mr. Openshaw.*

MR. OPENSHAW shewed (1) a child 16 months old from whom he had removed a congenital sacral tumour. It had been noticed for four months, there was no fluctuation or pulsation, the skin was not adherent except at one spot. It had caused retention of urine. The wound had healed by first intention, although the coccyx and lower end of the sacrum were removed. A microscopical section of the tumour showed epithelium of all descriptions, and striated muscle fibres. It was much larger in the pelvis than appeared from external appearance.

(2) Another tumour of the sacrum of a sarcomatous nature, which had caused pressure on the rectum and bladder, with destruction of the functions of both viscera.

(3) A third tumour was shown of the same region, of a cystic character, thus exhibiting three forms of congenital tumour of the sacrum.

The PRESIDENT asked whether Mr. Openshaw could say whether from examination he gained any idea of the possibility of removal. He also asked whether the cyst was epithelium lined and the nature of the fluid. In answer Mr. HALLIDIE, for Mr. Openshaw, said the epithelium was partly squamous, partly ciliated.

SIR HUGH BEEVOR asked Mr. Openshaw where he thought the rhabdomyoma had started from. MR. OPENSHAW replied to Sir Hugh Beevor that the tumour had started from Luschka's gland which was the remains of the human tail, and hence the heterogeneity of the tumour. He did not think it had anything to do with the Wolffian bodies.

## TUMOUR OF BRAIN AND SCALP.

*Case shown by Dr. Fred. J. Smith.*

DR. FRED. J. SMITH showed a tumour of the brain and scalp, removed from a woman of about 35. In November, 1893, she had influenza, followed by severe headache; in January, 1894, she consulted Mr. Passmore of Gainsborough, and optic neuritis was discovered. In May, 1894, a small nodule of growth appeared beneath the scalp, and in June she was admitted to the London Hospital under Dr. Smith with complete blindness from consecutive optic atrophy, headache and vomiting, but no localising features. While in hospital the nodule under the scalp had not increased at all, but subsequently it increased rapidly and the patient died in October, 1894. At the autopsy a large tumour was found pushing up the scalp, soft in character and almost diffuent in the centre; in the right frontal lobe was found a large mass of growth extending also into the left frontal region; the two masses were connected by small processes of growth about the thickness of a slate pencil, pegging, so to speak, the dura mater and bone together, passing cleanly through both and not infiltrating either of them. Dr. Smith remarked that there were three points of special interest in the case: (1) The caseation of a true sarcoma; (2) the manner in which the intra- and extra-cranial masses were joined together by small processes instead of by a thick continuous growth; and (3) the absence of localising symptoms caused by the tumour in the brain.

The tumour and full history are in the London Hospital Museum.

MR. SYMONDS said the case was to him unique, but suggested that the growth had penetrated through natural foramina in the skull.



MR. OPENSHAW said a similar tumour of the scalp was in the museum of the London Hospital, but not coming from the brain. He said that tumours perforating the cranium usually did so by one large aperture ; the present case was to him unique.

MR. HALLIDIE mentioned a case of a gumma perforating the cranium in a similar manner.

DR. RUTTER gave a few details of the history of the case in hospital. He mentioned the fact that the patient was absolutely blind from optic atrophy. The diagnosis was for some time in doubt.

DR. J. H. SEQUEIRA mentioned the case of an abscess of the frontal lobe which had existed for 25 years without symptoms.

DR. F. C. TURNER thought the growth began externally and invaded the brain secondarily. He mentioned the crowbar case of irritability of temper following extensive destruction of frontal lobes.

SIR HUGH BEEVOR commented on the microscopical characters of the specimen.

## GALL STONES.

*Exhibited by Dr. Hingston Fox, and Messrs. Openshaw  
and Symonds respectively.*

DR. FOX showed two gall stones, causing fatal obstruction of the bowels.

The stones, weigh respectively 10·97 and 3·66 grm. The larger is roughly cylindrical in shape, being about three centimetres in diameter (over 1 inch), having a facet at each end, the one saddle-shaped, the other slightly concave. It would thus seem to have lain in the gall-bladder in such a manner as to fill its bore, with calculi playing on it at either extremity.

The specimens were taken from the body of an old lady, an almshouse inmate, aged 63 years. She had been in bad health for several years, suffering from dyspepsia, vomiting of pellets of gastric mucus, constipation, and some attacks of localised peritonitis beneath the liver. She died after 12 days' illness, with symptoms of obstruction, semifæcal vomiting, etc., but the obstruction was partially relieved before death.

At the autopsy a dense cicatricial mass was found invading the under part of the liver, the transverse colon, the first

part of the duodenum, and the great omentum, and containing the partly obliterated gall-bladder. A large ulcer was present in the duodenum about  $1\frac{1}{2}$  inches from the pylorus, and as its lower part had perforated the wall, opening into the gall-bladder. Through this opening the calculi had evidently passed,—they were found in the jejunum, the smaller one about three feet from the pylorus, and the larger about two feet lower down; this latter apparently filling the lumen of the gut, which below this point was contracted and nearly empty.

The cicatricial mass appeared to me to be the result of previous inflammatory attacks, and not of malignant nature.

NOTE.—Mr. Mayo Robson, in a paper on this subject read before the Royal Medical and Chirurgical Society on January 22nd last, describes four varieties of Intestinal Obstruction depending on Gall stones.

1. Local peritonitis about the gall-bladder causing paralysis of the bowel.
2. Volvulus of the small intestine, due to colic, &c.
3. Mechanical obstruction of small intestine by a large calculus.
4. Obstruction due to adhesions or stricture.

The present case belongs to the third category—the obstruction, although not quite complete, proving fatal by shock in an asthenic subject. It appeared from the discussion of Mr. Robson's paper that cases of obstruction due to gallstones are comparatively of rare occurrence, but that the third variety is the most frequent.

MR. OPENSHAW showed a portion of liver, gall bladder, and duodenum, together with a piece of the ileum from which a gall stone was removed by operation. The incision closed by sutures is seen at the front of the specimen. The patient was 73 years of age. Four days before admission she was suddenly seized with violent abdominal pain—referred to the umbilicus. The pain was paroxysmal in character. She was constipated and vomited frequently—the ejecta having an offensive odour. Abdominal section was performed, and a gall stone was felt in the ileum, one foot from the ileo-cæcal valve. It was so hard that needling failed to break it, so the bowel was incised and the stone removed; it measured  $1\frac{1}{2}$  in. by 1 in.. It had ulcerated its

way from the gall bladder into the duodenum. The woman lived twelve hours, sinking from collapse. *P.m.*, the wound in the gut held water. Examination of the gall bladder and duodenum showed the aperture through which the stone had originally passed. There was no history of previous gall colic, which fact had led to the overlooking of a gall stone as the cause of symptoms.

MR. SYMONDS asked Mr. Openshaw as to the nature of the adhesions between gall bladder and duodenum, and when he thought the stone had passed.

SIR H. BEEVOR asked if there had been any recent suppuration in the gall bladder. He mentioned a case he had seen years ago of great enlargement of the gall bladder with pultaceous contents.

MR. SYMONDS showed a similar specimen of gall stone causing obstruction ; it had been removed from a lady of 62. In November, 1894, she had colic, but improved till January, 1895, when she was seized with intense abdominal pain and vomiting continuously for three or four days. When seen she was quiet, pulse fair, face dusky. Abdomen was opened next day ; a band was found in the peritoneum, not the cause of trouble, and behind was found the stone in the small intestine. The operation was very short in duration, but the patient died the same day. The bowel was brought into the wound and secured with an indiarubber band threaded through the mesentery. No post-mortem was made, and consequently the exact seat of obstruction was not ascertained, but Mr. Symonds thought it was high in the jejunum.

DR. COTMAN asked as to the condition of the gut, and also if the mass was a gall stone as it was so unusually heavy.

SIR HUGH BEEVOR said a drop of chloroform put on the stone and then examined microscopically would solve the question of the nature of the mass.

MR. OPENSHAW asked when Mr. Symonds would operate ; his own rule being if fæcal vomiting were present, then operate.

MR. HUMPHREYS said that Mr. Treves washed the intestine out as well as the stomach.

MR. SYMONDS in reply said that if we waited for fæcal vomit we waited too long very frequently ; and said also that washing out the intestine was not easy. He thought purgatives might help. Two



days' persistent vomiting was, he thought, long enough to justify operation.

### CARCINOMA OF ÆSOPHAGUS.

*Specimen shown by Mr. Hope Grant.*

MR. HOPE GRANT showed a specimen of malignant stricture of the æsophagus, taken from a woman of 50; the chief symptoms were vomiting and very rapid wasting. For six weeks before death the patient was fed either by the rectum or by a catheter passed through the stricture. Microscopic examination showed the stricture to be due to a scirrhus carcinoma just above the stomach, not showing any ulceration in the æsophagus, but a very tight—to naked eye apparently purely fibrous—stricture, but the infiltration of the glands in the neighbourhood and the microscope proved its nature.

### CYSTIC SARCOMA OF KIDNEY.

*Specimen shown by Mr. Openshaw.*

MR. OPENSHAW showed a large cystic sarcoma of the kidney; it had been removed from a child of three years of age, the growth had been noticed one month before admission to Hospital. The diagnosis rested between sarcoma, hydro-nephrosis, and hydatid of the kidney. Operation was considered justifiable, but the child died very shortly afterwards. The specimen had been hardened in Formal.

SIR HUGH BEEVOR asked if Mr. Openshaw had found any myomatous tissue in the tumour. In the specimen under the microscope he saw a great variety of tissue elements.

MR. SYMONDS asked how often such cases were saved by operation; he personally felt that it was really not worth while operating from the point of view of saving life. He thought only adrenal tumours were successfully removed.

MR. OPENSHAW, in reply, said that diagnosis being somewhat doubtful he had considered operation justifiable, and then thought that the slight chance of recovery was better than the absolute certainty of death by leaving matters alone. He had been unable to find any myomatous tissue.

## CARCINOMA OF STOMACH, INTESTINE, &amp;c.

*Specimen shown by the President.*

MR. SYMONDS showed a specimen taken from a patient whom he had previously brought before the Society, after the performance of gastro-jejunostomy for carcinoma of the stomach. The patient had lived for nearly a year after the operation, in fair general health comparatively speaking. He had obtained an excellent communication between stomach and jejunum. The growth in the liver had caused death. The method of performing the operation was the point on which Mr. Symonds laid chief stress.

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MARCH 27th, 1895.

## VARIETIES OF RHEUMATOID ARTHRITIS.

*Abstract of Paper read by Dr. R. Fortescue Fox.*

The writer first related cases of "rheumatoid" arthritis in young subjects, in whom (especially in young women), the disease assumed, in his experience at Strathpeffer Spa, its most severe, intractable and typical form. A large number of joints are usually affected, and there are from the first profound debility, rapid heart, profuse perspiration and progressive wasting. The articular symptoms vary according to the severity and duration of the malady. During the inflammatory stage, which commonly extends over several years, there is a varying degree of heat, pain of a special character, swelling and synovial effusion. Stiffness may ensue early. The second period is marked by degeneration and atrophy of joints and muscles, with occasional inflammatory relapses. Deformity is often but slight, and lipping of the articular edges and bony outgrowths are seldom met with in arthritis of the young. The terminal phalangeal joints are often affected with simple primary atrophy.

Among 40 cases belonging to this group four out of five are females, the average age at onset being  $22\frac{1}{2}$  years, the age

of catarrhal affections and of tubercle, and when nervous tension and emotional breakdown are so common. Depressing causes, and certain localities and climates favour the development of the disease, and various prae-arthritic symptoms are observed.

A second clinical group is the generalised arthritis of the climacteric period (13 cases out of 65). The average age at onset is 48 years. The disease is often less severe than it is in younger life and intermissions of one or two years are not uncommon.

There is less profound constitutional disturbance, and the arthritis may become localised in one or a few joints. It is often confined to the left side of the body. It may be complicated with gouty and other conditions peculiar to the climacteric epoch. The writer does not regard it as usually connected with abnormal conditions of the uterus and ovaries. Of 16 cases in married women, 12 were mothers.

The third clinical variety is senile arthritis of many joints. The average age of onset in 12 cases is  $56\frac{1}{2}$  years. Influenza or other debilitating illness often precedes the development of this arthritis, which is sometimes only a part of a general physical and nervous breakdown. This is the only form of arthritis that can be truly said to belong to the degenerative period. Like the arthritis of the second and third decades of life, as well as that that belongs to the climacteric period, it runs parallel to forms of nervous disturbance and especially to insanity, which has a special incidence at these epochs. In the aged there is further a depressed condition of nutrition in the joints, as evidenced by the ease with which local arthritis is set up by injury.

In discussing the heredity, the writer found a family history of joint affections in 33 cases out of a total of 65. The invasion of joints is usually centripetal, and the feet are first affected more commonly than the hands.

Localised or local arthritis is to be clearly distinguished from the generalised disease, as also so-called last joint arthritis or *nodi digitorum*, which are gouty changes in the middle-aged or senile subject.



This interesting and instructive paper is published in full in the "Lancet," Vol. II. for 1895. pp. 79 et seq.

DR. FRED J. SMITH remarked that Dr. Fox's paper seemed to throw light on the very numerous cases of arthritic disease which appeared amongst hospital out-patients: he recognised three typical groups (1) acute rheumatic fever (2) acute gout and (3) typical rheumatoid arthritis, with its associated deformity and luxations. But the majority of cases of joint disease did not come under any of these groups, and he now thought that they were the subacute commencements of rheumatoid arthritis—they were at any rate anomalous when referred to the descriptions of the types as given in textbooks of medicine. He asked Dr. Fox what remedies he had found most suitable in his cases.

SIR HUGH BEEVOR agreed with Dr. Smith as to the absence of type cases amongst out-patients, and thought that Dr. Fox's paper was of great value for its description of types. He remarked on the omission from text-books of the constitutional symptoms upon which Dr. Fox had laid so much stress in his first group; the pulse, sweating, atrophy of skin, &c., shewing that they were essential elements in the diagnosis. He regretted that Dr. Fox had not given more post mortem details, and suggested the possibility of the discovery of lesions of the nervous system as definite as in other acknowledged nerve diseases.

DR. LOUIS BLANC (Aix-les-Bains) said he had seen much of rheumatoid arthritis; he agreed with Dr. Fox in thinking that it was primarily a nervous disease, but thought that the poison developed in the blood by any infectious disease, *e.g.* scarlet fever, smallpox, &c., was capable of so affecting the nervous system as to start rheumatoid arthritis into active existence. He illustrated the excessive sweating and the affections of the nails (both of which are well marked in rheumatoid arthritis) as proofs of the nervous origin of the disease. As regards treatment he insisted upon a generous diet, baths, and better general surroundings as the main points: he noted the fact that improvement often set in at a distant period after treatment, and used this as an argument to show that the local trouble was influenced favourably only in an indirect manner through the nervous system. He thought that as the skin, the nails, and the joints were all affected this pointed to the disease being a separate entity. It was, he remarked, common in England but rare in France, and thought that possibly the morning tub was one factor in this local frequency, inasmuch as he thought that insufficient drying and exercise after the bath might lead to a chill.

DR. GLOVER thought that anæmia was a very important element in the etiology of the disease, and suggested also that tubercle, nervous exhaustion and shock might each also play no inconsiderable part in the production of rheumatoid arthritis. He would have liked to have heard a little more of Dr. Fox's views on treatment, and added as his own opinion on that point that alcohol had nothing to do with causing the trouble, nor would he advise any exclusive dieting.

DR. A. GARROD thought that Dr. Fox's classes certainly represented clinical facts. He said that very little was known of the anatomy of

the disease as it occurred in young subjects, observations having been chiefly made on the joints of old people ; he regarded ulceration of cartilage as of fundamental importance, though he admitted that it was found under many different clinical conditions, as instanced by Dr. Fox's groups. In prognosis he differed from Dr. Fox, for he thought that the cases in young people, though acute enough in appearance, offered a better hope of improvement than those occurring later in life. As regards treatment, he remarked that a week or two's treatment was useless, and would only result in disappointment ; months, at least, must be devoted to remedial measures. Syr. Ferri Iodidi he had found the most useful drug, and next to this arsenic had given the best results, but treatment at some natural baths was usually also necessary. He strongly urged that the cases must not be treated by a depressing dietary and deprivation of alcohol as though they were gouty.

Dr. Fox, in reply, stated that it was with diffidence he had sketched his three classes ; he fully appreciated the influence of the conditions Dr. Glover had mentioned. He maintained his belief that group 1 of young cases offered the worst prognosis. He found that those drugs which helped anæmia were most useful, but gave arsenic the first place over Iodide of Iron. Hot baths, with or without massage, he had certainly found very useful as promoting healthy action of the skin, the climacteric class responding to this treatment most readily. A full, generous diet was, he considered, a *sine qua non*.

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APRIL 10th, 1895.—Clinical Evening.

### TRANSPPOSITION OF VISCERA.

*Case shown by Dr. Arnold Chaplin.*

DR. ARNOLD CHAPLIN exhibited a girl, aged 9 years, with transposition of the viscera. The patient was admitted last year to the East London Hospital for Children, under the care of Dr. Eustace Smith, with cough, expectoration and high temperature. On listening over the chest a good deal of rhonchus and crepitation could be heard, especially at the bases. The heart was pushed over to the right and there was dulness from the inferior angle of the left scapula downwards, with suppression of breath sounds. Taking these signs and symptoms into consideration, on a rapid survey of the case, the conclusion was not unnaturally arrived at that the child was suffering from a pleural effusion of the left base which had pushed the heart over to

the right side. A more careful examination, however, revealed the fact that the high temperature was due to otitis, and that the chief organs of the abdomen and thorax were transposed.

This case is interesting as showing a somewhat rare condition of things, and also as showing that the malformation may exist without any detrimental effect upon the patient.

MR. SYMONDS asked if such cases usually lived to adult life, and Mr. Openshaw mentioned a case in point of an adult from whom an ovarian tumour was removed, giving opportunity to the surgeon to feel the transposition from within.

## CASES OF SKIN DISEASE.

*Shown by Dr. J. Galloway.*

DR. GALLOWAY showed :

(1) A case of Lichen Planus, diffused on body and limbs of a young man of 28.

(2) A case of the same disease in a more localised form on inner side of knees and thighs.

(3) A case of skin disease in a boy of 2 $\frac{1}{4}$ , of typical papular form on legs and arms, with a few spots on the trunk.

DR. F. J. SMITH thought the third case a typical one of Lichen Planus, the others he did not recognise.

DR. COTMAN agreed with Dr. Smith in thinking that either names or diseases were undergoing a most marked change with each wave of specialism. He gave details of a case which had occurred to him with most excessive irritation. He thought the third case was Lichen Planus.

DR. CHAPLIN also upheld these views.

DR. GALLOWAY stated that of his diagnosis in cases 1 and 2 there could be no doubt. Of case 3, he said he thought whatever it was, it was not Lichen Planus, from (1) the age of the patient ; and (2) the central core of epithelium in each papule, with a minute bead of pus. Lichen Urticatus occurred to him next as a possibility. He then thought of a drug eruption, but he was still in doubt as to diagnosis, so he took it to the Dermatological Society, but here was met with differences of opinion as to the name to be given to the disease. Finally he felt pretty sure it was a halogen rash, or was due to some micrococcus in the skin or blood.



## WEBBED FINGERS.

*Case shown by Mr. Openshaw.*

MR. OPENSHAW showed a case of webbed fingers in a little child who also had deformities on the other hand.

MR. SYMONDS, speaking of deformities occurring in utero, mentioned a case which had come before him in which there was a ring of constriction round the leg of a baby ; he had raised a ring of superficial tissue and united the skin over his operation wound. He asked what Mr. Openshaw proposed to do.

MR. OPENSHAW in reply said he intended to separate the digits on both hands so as to produce useful isolated fingers.

## NÆVUS.

*Case shown by Mr. Openshaw.*

MR. OPENSHAW showed a boy of 15 with a large Nævus of the left cheek occupying the whole space from the mouth to the ramus of the jaw ; it had existed and steadily increased in size from infancy, the parents having refused operation previously. He asked what could be done to cure the condition, which was a terrible disfigurement to the boy and even threatened life itself.

MR. SYMONDS replied that the present case rather puzzled him ; he had been satisfied hitherto with excision, and had also found in some cases that injections of carbolic acid had acted very happily. In a case such as the present he would be afraid of the knife wounding the facial nerve, owing to the great size of the tumour.

## IRREGULARITY OF THE PULSE.

*Case shown by Dr. Cotman.*

DR. COTMAN showed a man of 73, showing great regularity in the intermittency of his pulse, three beats and a pause. He had recognised it for 18 months, but there was no evidence as to whether it had existed during his whole life.

DR. CHAPLIN remarked that excitement made the regular intermittency rather irregular ; he said that as it was there was no heart disease to be thought of.

MR. OPENSHAW quoted the late Dr. Sutton that regular intermittency was of no importance.

## DOUBLE CEPHALHÆMATOMA.

*Case shown by Mr. Openshaw.*

MR. OPENSHAW showed a case of double cephalhæmatoma in a child four weeks old.

## TREPHINING FOR CEREBRAL ABSCESS.

*Three cases shown by Mr. Openshaw.*

*Case I.*—The man was comatose at the time of operation ; he went out well, and returned in two months' time with recurrence of symptoms. The abscess was then tapped through the old trephine hole, the symptoms disappeared, he went out well ; in three months' time, however, the symptoms again appeared, and a third operation was done with trocar and canula and drainage tube ; the latter was a large tube and was left in until granulations forced it out ; he has now been quite well for three years.

*Case II.*—A precisely similar case, except that the abscess was in the right side of the brain. The diagnosis was made by Dr. Jackson on comparatively few symptoms.

*Case III.*—A similar case, the abscess being on the right side of the brain, and the patient got well without operation, the symptoms gradually clearing up. All three cases were due to middle ear disease. Dr. Jackson had made the diagnosis in the last case as well as in the other two ; the mental condition seemed to offer a slight difference between the third case and the two others.

MR. SYMONDS asked Mr. Openshaw as to his seat of election for trephining.

In reply, MR. OPENSHAW said he preferred to trephine low down.

APRIL 24th, 1895.

THE NECESSITY FOR A CENTRAL ORGANISATION  
IN THE MEDICAL PROFESSION.

*Abstract of Paper by Mr. F. R. Humphreys.*

MR. F. R. HUMPHREYS read a paper on the Necessity for a Central Organisation in the Medical Profession, illustrating his arguments by facts derived from the experience of himself and others, so as to show the necessity for speedily meeting the evils described. The lay medical aid associations were first attacked, and reference was made to the resolution of the General Medical Council, which had appointed a committee to consider the question and had come to the conclusion that these associations overworked their officers and underpaid them. It was unfortunately the case that some men would not allow any mere ethical questions to prevent their acquiring practices at the expense of their neighbours. Lay companies must be fought with capital if they were to be beaten. Provident dispensaries appeared to have been established early in the century, and not only now were the rates for members too low, being at the highest 7½d. for a visit or consultation, but a great part of the money was expended on unnecessary premises and officers. Mr. Humphreys gave a few instances of payments at various provident dispensaries, including Tunbridge Wells, Reading, Leamington, and Salisbury, showing the latter to be the only one which attempted to pay the medical men properly. In the case of sick clubs, which were provident societies without wage limit, the club officer received usually from 3s. 6d. to 5s. per head per annum, but in the country these clubs rarely paid their medical men more than 4s. per head per annum, a sum which could not be remunerative, but which would be accepted in order to avoid competition. It was simply impossible for a dispensary practitioner to comply with the requirements of medical practice while charging such fees. He must be dishonest in some direction in order to make enough to live upon; and inferior and insufficient drugs, unqualified assistants, card



advertising, &c. were a few of the common evils attached to "cheap dispensaries." The only way to avert these evils lay in a properly worked provident system, under which charges, fair alike to medical men and patients, were made. The present condition of things would not be long tolerated if thoroughly exposed through the medium of a representative committee under the Royal Colleges, taking evidence like a House of Commons select committee, as already proposed by Mr. Bryant. It was estimated that in London one in every two persons received charitable medical relief at the out-patient departments of hospitals, and from figures given by Dr. Rentoul it would appear that 50 per cent. were unsuitable cases. Mr. Humphreys then read part of a letter from a medical man who had acted as locum tenens last July at a public dispensary, where he had to see 210 patients in three hours, a hundred more applicants being dismissed with "repeat" medicines. Many of the cases were utterly unsuitable, and some came from Gravesend and other equally distant places to be treated with medicine for a week for sixpence. Another evil connected with hospitals was the pay ward. If a medical man could send his patients to the pay wards of a hospital and attend them there it would not matter, but when once they were within the hospital walls they were practically lost to the outsider. A further danger threatened in the shape of nursing homes where patients were either attended by no medical man at all or by one specially appointed to the institution. No medical man should patronise these nursing homes unless the patients were under medical advice. Another important question was that of the relations between consultants and general practitioners. The junior consultants had very inadequate remuneration, but if the leading physicians would take fees corresponding to their position the difficulties would be less. Much might be done if those practitioners who were willing to act as pure consultants were to state this fact in some binding way. The term "infamous conduct" had been much objected to as meaning one thing to the profession and another to the outside public. Mr. Humphreys had written to Sir Richard

Quain asking him if the General Medical Council would be likely to approve of an organisation to promote discipline in the profession. Sir Richard Quain replied that he was confident that the Council would keep within its statutory authority, which does not enable it to interfere in the internal discipline of the profession ; and in another letter he said that it would be quite impossible for the Council to strain its powers in that direction. Under these circumstances what controlling influence could be devised ? Mr. Humphreys himself proposed a union of medical associations, whose delegates should form local boards and these in turn appoint directors.

The CHAIRMAN then asked for opinions on the best way of meeting the evils complained of, whether by means of purely moral and ethical influences, or by the establishment of an ethical association to which every man would belong, non-membership marking him as not respectable. It had been suggested that the best remedy for the special evils attending provident societies was that all the medical men in a particular district should combine together to form a provident society of their own, the fees being used for the payment of the members.

MR. BRYANT said that the diseases of the body corporate needed attending to just as much as the diseases of the body corporal. Most of the faults that existed in the profession arose through competition ; but what power had the General Medical Council to influence those who undersell ? It was not only in the lower grades of the profession that this under-bidding went on, but in the higher grades as well. Five years ago the Government was asked by the Royal College of Surgeons of England for further powers, but it would not grant them. It had been again approached on the subject and a series of bye-laws put before the Home Secretary. Since the question was put before the Home Secretary, an association had arisen speaking in the name of the Members of the Royal College of Surgeons of England and asking the Home Secretary not to grant the desired powers. The only mode of punishment was by removing the names from the list of Members of the College, but that seemed to be too severe. It was easy to take a diploma away, but not so easy to restore it.

DR. GLOVER said that he was disposed to agree with Mr. Bryant that the powers of the General Medical Council were too limited to permit of its doing anything. He did not think that any attempt to interfere with the practice of medical men would have the support of the Council. It had been already tried and the Council declined to pass any judgment upon the conduct of the men. The medical corporations might do more than they did, the power of the General Medical Council being reserved for extreme cases. The medical corporations

would condemn what seemed to be a contempt for their authority. They would take the name of a medical man off their list and they would deprive him of his diploma, but the man from whom the diploma was withdrawn would use his title, and continue to do so, without the slightest sign from the corporation which had withdrawn the diploma. Could anything be more obvious than that it was the duty of the body whose rules had been defied to bring that man to court? In every locality there should be an association of medical men to bring pressure to bear upon those who did these things.

DR. ALDERSON said that the out-patient departments of hospitals had done a grievous wrong to the general practitioner. He wished to support the proposition made by Colonel Montefiore as to the desirability of a Central Board. Such a board would prevent the starting of unnecessary special hospitals merely for the benefit of one medical man. As to the sick club system, the General Medical Council could not do much, but some improvement might be expected to result from higher education. He agreed with Dr. Glover that the profession must not be made into a trade, and approved of the suggestion that medical men should not be allowed to dispense their own medicines.

MR. COTMAN said he was under the impression that the General Medical Council was competent to declare what was infamous in a professional respect. Without combination nothing could be done, and medical men should combine in the various districts in which they live.

DR. CAMPBELL POPE thought that the General Medical Council would greatly help if they could define some degree of misconduct less strong than that which was termed "infamous." Being struck off the Register was a very serious thing, and if something less severe could be arranged it would have great effect. The Council should also notify to the registrars the names of those who had been struck off the Register. The practices which came before the Society were canvassing patients for clubs and sending out advertisements, and such cases should be reported to the corporations from which the offenders received their diplomas. Many patients with good incomes were going daily to various hospitals, and the special hospitals were patronised by a better class than the general ones, as had, in fact, been pointed out by the managers of special hospitals themselves. There was a certain flavour of charity connected with the general hospitals, and people did not like to say they had been to Guy's or St. Bartholomew's or University College Hospital, but they did not object to say that they had obtained advice at the Hospital for Paralysis or for Diseases of the Eye or the Skin. Moreover, there was only one University which could remove a member for misconduct, and many men who had been deprived of their diploma still flourished their University degree in the face of the General Medical Council. As Mr. Bryant had remarked, the reform must come from the conscience of the man.

MR. SMALLPEICE said that the corporations and colleges might influence erring members by censuring them without removing them.



What was wanted was an ethical association in some form which should be regarded as authoritative.

DR. CAGNEY said that he did not believe that any medical council would have the power to deal with this question. Medical men did not require looking after more than any other body of men, and conscientious medical students would do all that was required to raise the condition of the profession.

MR. HUMPHREYS, in reply, said that those men who charged unremunerative fees were degrading the whole profession, and some protection against them must be found. Medical etiquette had no weight at all with such men.

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### OCTOBER 9th, 1895.

MR. C. J. SYMONDS (President) rose to address the Fellows, on the occasion of their first meeting for the Winter Session of 1895. He chose for his text the advisability or justifiability of exploratory abdominal operations, and proceeded to say that he had performed such operations two or three times lately for purposes of diagnosis.

He divided the cases in which the thought of such procedure might be entertained into groups, and the first group was those cases in which, from the previous history and the present symptoms, it might reasonably be inferred that a simple exploratory incision was all that was required—this incision he considered, by itself, did not add any serious risk to the patient. In this group he gave several examples.

(1) A young soldier, with an abdominal tumour in the median line. It proved to be a sarcoma of the mesentry surrounding the superior mesenteric artery.

(2) A woman with symptoms pointing to gall stones, but operation proved a malignant growth of the colon.

(3) A woman with a tumour below the liver, which proved to be a growth in the great omentum with Carcinoma of the colon.

(4) A case of obstructive jaundice proved to be Carcinoma of the liver.

(5) The case of a medical student, who presented symptoms of obstruction of the bowels. Operation showed inflammation and suppuration round and near the bladder; he recovered and is now quite well, twelve years after the operation.

(6) A lady who fell and injured her abdomen, severe vomiting supervened; by exploratory incision a slight rupture of the liver was found: she got quite well.

The opposite side of the picture in this group was then illustrated, viz: where no exploration was made, or it was made too late, and the patient succumbed. The examples included—(1) perityphlitis with diffuse general suppurative peritonitis; (2) a case of hydatid of the liver in a boy, with the symptoms of obstructive jaundice; (3) the case of a medical friend of Mr. Symonds, who presented at first somewhat doubtful signs of perityphlitis, later on a large perihepatic abscess formed; this was opened, but the patient died.

The second class of cases consisted of those in which adhesions of the intestines, more or less close and numerous, caused the case to assume a more serious aspect than a simple incision, without such complication, was likely to be present: the risk of rupture of the intestine or other organ in separating adhesions being a very real and important one. He mentioned in this class the case of a child in whom he had had to resect a large piece of intestine, owing to adhesions of the coils to one another.

A third group was formed by cases in which the original diagnosis of perforating gastric ulcer had been made. Of this diagnosis he gave three examples: The first died of pneumonia eight or nine days after the operation, which was successful so far as its immediate results were concerned; the second case proved to be a mistaken diagnosis, and the patient was really suddenly attacked with pneumonia only; the third was a girl who had all the symptoms of gastric ulcer, including severe hæmatemesis, followed by acute features pointing to a perforation; an exploratory operation was performed, but no ulcer was found, and the

patient got quite well. In such cases as these, he said, operation was imperatively called for, because if perforation existed, recovery was hopeless without surgical interference. The fourth group mentioned was those where abdominal section was performed because of disease of the kidney : in this class Mr. Symonds laid it down as a golden rule that nothing in the shape of nephrectomy should be done unless and until the other kidney had been thoroughly explored and found to be healthy. In illustration he quoted a case in which he had found a large tubercular left kidney that required excision, but as no right kidney could be felt he had left the operation uncompleted, and the patient sank from tuberculosis of a single kidney.

Mr. Symonds next proceeded to discuss the question as to when the abdomen should be opened in cases of acute obstruction of the bowel or perforation of an ulcer,—was one justified in operating immediately, or should one wait a little while? As a plea for early operation, he said that with a fairly healthy peritoneum manipulation was not a very important matter, but let the bacterium coli commune once get a fair hold and the danger of any operative interference and manipulation became at once very terrible. He considered that a very great responsibility was taken by the physician who waited till the bacterium had gained a powerful hold. On the other hand surgeons have to admit that occasionally matters are made worse by operation ; a stenosed pylorus may have the finishing touch put to it, and complete obstruction arise from adhesions after interference.

MR. HUMPHREYS asked whether hernias frequently occurred at the site of the incision, and whether adhesions might not cause serious after consequences.

In reply, MR. SYMONDS said that he had never found adhesions, as the result of operation, in any case that he had seen on the post mortem table, when some long time had elapsed between the operation and death.



## THE INFECTIOUSNESS OF RHEUMATISM.

*Paper read by F. Rowland Humphreys, M.R.C.S. Eng.,  
L.R.C.P. Lon.*

MR. PRESIDENT AND GENTLEMEN,

The subject of my paper this evening is one which is of the greatest importance to us, both as human beings and as medical men. The possibility of acute rheumatism being an infectious disease has long been before the minds both of the profession and of the public. In the Milroy Lectures for 1895, Dr. Newsholme, M.O.H. for Brighton, showed "it must be included among the infective diseases." The method of demonstration which he adopted was that of combining the statistics of cases of rheumatic fever, derived from many different sources and from many parts of the world. The most important sources of his information were the facts derived from the countries of Norway and Denmark, where the cases of this complaint medically treated, have for a very long time past been notified to the Authorities. Again a special discussion on the subject was held at the recent meeting of the British Medical Association. Dr. Cheadle said that the facts were strongly in "favour of a micro-organism invasion," and his opinion was agreed to by most of the speakers present.

I am thus emboldened to place the result of my observations on the subject before the Fellows of this Society, as, whether my conclusions meet with approval or no, they will serve to form the text of a useful discussion. A Society like this, which numbers amongst its Fellows a long list of general practitioners, should be able to do something towards clearing up the difficulties which surround this somewhat obscure disease. Hospital records can do little in the way of showing whether a given disease belongs to the infectious category or no; the proofs, in one direction or the other, must come from those medical men who have the

opportunity of seeing the cases surrounded by their ordinary companions and subject to the influences of everyday life. Unfortunately, the rush of the daily medical life prevents note-taking to any very great extent, and when the general practitioner wishes to publish an interesting case, he has often to refer to his memory and his prescription book and visiting list, to remind him of the facts in connection with it.

Amongst the deficiencies in the lectures referred to, as Dr. Newsholme pointed out, was the absence of any indications as to the period of incubation of acute rheumatism, and of any hints as to how the disease is transmitted from person to person.

It is thus important to recognise any non-characteristic cases which may form the chain which connects cases of the disease with one another, if the infectious theory be true.

My hypothesis is this—that the poison of acute rheumatism is one which may manifest its presence in a number of ways, of which rheumatic fever is only one, though the severest and most typical form.

This supposition is based on the study of a number of cases of acute rheumatism and allied disorders which have fallen under my observation during the last ten or eleven years. My notes include some 240 cases of illness, in about 160 different people. Of these there were 39 cases of acute or sub-acute rheumatism, 78 of tonsillitis, 32 of pharyngitis, and the balance made up cases which showed by their articular pains, profuse sour-smelling sweats, &c., that they were closely allied to acute rheumatism—they including some cases of Erythema and Urticaria and other disorders occurring in rheumatic persons.

I may say that some five or six years since I was led, by some cases which occurred in my practice, to think that acute rheumatism should be classed among the infectious diseases, and from that time I have been carefully studying all cases of illness which appeared to be connected with it, or which had arisen under circumstances which had exposed the patient to the infection of acute rheumatism. I was a

little afraid, I must confess, of putting on paper the results at which I had arrived, because they appeared to prove too much, but as many of them coincided with those expressed subsequently by Dr. Newsholme, I felt that as I had apparently got on the right track in respect of some of the facts of the disease, I might also have made some approximation to the way in which infection was spread.

The leading characteristics of acute rheumatism are,—its tendency to relapse, its tendency to recurrence, and the rapid abatement of its symptoms under the action of the salicylates. With these go the liability to cardiac complications and to chorea. Now, if one traces out the history of cases of acute rheumatism both before and subsequent to the attack, one finds that in a very large proportion of cases, the patients suffer from minor complaints which may or may not be recognised as of a rheumatic nature.

These are chiefly certain inflammatory affections of the throat (Tonsillitis, Pharyngitis, with their accompanying affection of lymph vessels and glands), and cutaneous lesions more frequently erythematous in type though, by no means rarely, herpetic. There is also a close connection between tonsillitis and perityphlitis; in nearly every case of tonsillitis which I have seen for some years past there has been pain and tenderness in the right iliac fossa. I have seen undoubted instances of this complaint also in connection with pharyngitis and other rheumatic symptoms. It is a curious fact and well worthy to be borne in mind in this connection, that salicylates often act like a charm in typhlitis, thus establishing a further likeness to rheumatism.

I was led by some of my cases to think that the poison of rheumatic fever might be transmitted by the agency of these minor affections, that it might develop in some persons as the acute general disease and in others as one of the minor local affections, but with a tendency to interchange its character at different times or in different subjects.

This hypothesis would not be at variance with the general characteristics of our infectious diseases. Take phthisis for example, a disease to which rheumatism may on my



hypothesis be very closely compared, and to which indeed Dr. Newsholme compares it. Phthisis has its skin, its throat, its lung, its abdominal, and its joint affections. Prior to the close study of this complaint (made easy by the recognition of its bacillus, it was not possible to state that these different affections were tuberculous except when developed in a characteristic manner. In rheumatism there are, one may say, no characteristic appearances, only characteristic localities, and until we find out the real cause of the complaint, it will be impossible to say absolutely what is and what is not a rheumatic lesion.

The steps by which I investigated the subject were as follows:—I first made an analysis of my notes. On the results arrived at, I built my hypothesis. I then laid down certain propositions which would tend if proved, to demonstrate that the hypothesis was a correct explanation of facts. And I then went over my notes minutely to see whether the facts recorded supported the propositions.

My first proposition was,—If the minor complaints which I have mentioned (Tonsillitis, Pharyngitis, and Erythema) were manifestations of the presence in the system of the rheumatic poison, they should be apt to show themselves as complications of rheumatic attacks, and, like acute rheumatism, should have a tendency to recur again and again and to occur with special frequency in persons who previously or subsequently have suffered from acute rheumatism.

The following cases, taken from my own notes, are illustrative of sequences in the same individual of what I take to be rheumatic affections.

1.—*Girl of 19*.—Acute rheumatism, lymphangitis of the glands of the groins (there was no vaginal discharge), acute tonsillitis, endo- and pericarditis, and corneal ulcer.

2.—*Woman æt 35*.—Acute tonsillitis, erythema papulatum, acute rheumatism.

3.—*Sister of 2*.—Precisely similar sequence, I was informed.

4.—*Woman of 36*.—Acute tonsillitis, lymphangitis of neck, sub-acute rheumatism, erythema nodosum, and relapse of rheumatic fever.

5.—*Girl 25.*—Purpura, general arthritis, endo- and pericarditis, severe sore throat.

6.—*Woman.*—Pharyngitis, general erythema, sub-acute rheumatism and endocarditis.\*

My second proposition is : If acute rheumatism, tonsillitis, pharyngitis, erythema, be manifestations of the presence of the same infectious parasite, they should have each of them a period of incubation of approximately the same duration.

I find in my notes records of 23 cases of acute rheumatism in which the patients had not been well for from seven to 21 days previous to the onset of the illness ; that is, in 85 per cent. of the cases there was evidence of an incubation period of this duration.

Of 37 cases of acute tonsillitis, with notes bearing on the point, 26, or 70 per cent., gave a similar history again lasting from seven to 21 days.

Of 18 cases of acute and sub-acute pharyngitis, 12, or 70 per cent., gave an account of not having felt well for from seven to 21 days beforehand.

These cases occurred in persons who were "rheumatic," but independently of an attack of acute rheumatism.

It is remarkable that when acute rheumatism follows an acute throat attack, usually they have the appearance of two consecutive illnesses (a week or longer often intervening between them), of a relapse rather than of two independent diseases.

I have remarked that there is one noticeable exception to the duration of the incubation period in all the complaints I have mentioned. This is in cases where an attack of acute throat inflammation or of acute rheumatism follows, as not unfrequently happens, exposure to sewer gas, in which case the incubation period is often shorter than that which I have indicated. This appears to be especially the case where the exposure has been of short duration, but where the smells have been very marked. It may then be of any duration

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[\* See also article by P. Dalton, "B.M.J.," March 1st, 1890, and the report of a "Discussion on Tonsillitis," "B.M.J.," 14th Sept., 1889.]

The second part of my first proposition does not require special proof.

from one day upwards. This, however, is also observed in acute rheumatism following a fall or other slight accident.

My third proposition is : With the intervention of a lapse of time corresponding to the incubation period mentioned above, any of the minor complaints (which I claim as rheumatic manifestations) may be followed by an attack of rheumatic fever in another individual, where this second person has been in contact with the original patient or has come within the sphere of influence of the infection derived from his emanations.

I have notes of a number of cases which seem to prove this proposition. Thus, early in December, 1889, a barmaid had an attack of glandular inflammation of the neck with sore throat. On the 18th of the same month, one of the children in the house had an attack of acute rheumatism with endocarditis. On January 3, his mother had an attack of the same disorder. In 1888 she had had an attack of tonsillitis with endocarditis.

Again, one daughter in a family had a very severe attack of rheumatic fever, with purpura haemorrhagica and endocarditis, becoming convalescent at the end of September. On October 8, her sister had an attack of tonsillitis (she was subject to attacks of follicular tonsillitis). On November 3, her mother had an attack of acute tonsillitis with deep cervical abscess and severe joint pains. On December 23, each of them had an attack of tonsillitis, the mother having sub-acute rheumatism superadded.

In another family, one of the sons, who was liable to quinsy, had an attack of acute pharyngitis. Immediately following him, another son had an attack of a feverish nature, with pains in the joints. Next, a daughter, who was confined to her bed with paralysis of the legs, had an attack of acute tonsillitis. She had previously had acute rheumatism and acute tonsillitis. Finally the mother had an attack of acute rheumatism. The year following another son had an attack of tonsillitis with erythema and endocarditis.

In another family the baby had an attack of acute pharyngitis and lymphangitis about the neck. About a week



later the mother had an attack of acute tonsillitis, followed, after a short interval, by one of acute rheumatism, and the husband had an attack of acute tonsillitis shortly after his wife.

In another family, in November, 1891, the mother had a mild attack of a rheumatic nature. Early in January a daughter had an attack of acute tonsillitis, with erythema, endocarditis, and acute rheumatism. Three weeks later, a lad who was staying in the house had an attack of sub-acute rheumatism ; he had previously had rheumatic fever. In May, a lady visiting there had an attack of pharyngitis, and one of the servants had one of sub-acute rheumatism. At the end of the same year, another servant had a mild attack of rheumatism, and three weeks later the mother had an attack of herpes, following the course of the post auricular nerve. Quite recently she has had an attack of endocarditis with embolism of the middle cerebral artery, causing temporary paralysis of one side of the body.

In another family, a lodger had an attack of inflammation of the throat. About 14 days later one of the daughters, who had attended him during his illness, had an attack of tonsillitis. A few days later, her sister had a similar attack. About three weeks later, the mother had an attack of pharyngitis with acute rheumatism, endocarditis, and finally perityphlitis.

In another instance, rheumatic and throat attacks recurred constantly in a religious community for two years. I do not pretend to say that all cases of pharyngitis or of tonsillitis, are necessarily rheumatic, but I believe that by far the greater portion of these throat cases are due to that complaint, and that the infection is disseminated by them. In many of the families which habitually suffered from attacks of a rheumatic nature, there was a case of chronic tonsillitis, and I cannot but attribute the constant recurrence of the attacks to the infection diffused by this individual. At any rate I shall for the future look upon all such cases with the greatest suspicion, and insist upon the constant use of antiseptic throat applications.

DR. SHADWELL said that acute rheumatism had interested him for a long time. In hospital the disease was looked upon as a primary entity, but in private practice he had frequently noticed prodromal conditions, especially sore throat, and hence he was led to enquire into the relationship between acute rheumatism and sore throat. At first he had suspected the sanitary arrangements of the houses, and he mentioned two cases in which sore throat—arising, he suspected, from drain poisoning—was followed by acute rheumatism ; both of the cases were multiple in individual houses. A third example was that of a large family in which four or five individuals had tonsillitis, and several of the others were seized with acute rheumatism, the father suffered from a relapse with hyperpyrexia and died ; under the kitchen Dr. Shadwell had found two large cesspools. Illustrating a further proof of the infectiousness of rheumatism, he mentioned the case of a wife who, during her confinement, lay in the blankets which had served to wrap up her husband during an attack of acute rheumatism : in the interval they had not been washed, the wife was attacked by the disease. Dr. Shadwell thought that drain air—as distinct from the gases developed in sewage—contaminated drinking water and thus became a possible source of distribution of the poison of rheumatic fever. During the last few years he had come to recognise a peculiarity in the form of the tonsillitis which was followed by rheumatism.

MR. STEVENS thought that the evidence produced in favour of the infectiousness of rheumatism wanted very careful handling and sifting before drawing conclusions and accepting them as proofs ; if the bacteriologists could give us a bacterium, specific to the disease, that would be a great step in advance. He had himself observed cases in which a series of events similar to those quoted had occurred, he thought such series well deserved to be written up and their record encouraged till some light could be thrown upon them by their very accumulation ; they must at any rate set thoughtful men pondering on the key to their solution.

DR. HINGSTON FOX said the subject was very difficult to handle, and that Mr. Humphreys had great courage to start a new line of thought before the Society. That rheumatism might be a bacterial disease he thought quite possible, and that time might prove it such, but he did not think the position was yet established ; the clinical history of the disease showed that the parasite must be very different from those yet discovered. He thought that distinct infection from person to person was hardly suggested by the facts, a source of poison common to all the individuals being much more likely. He drew attention to the fact that certain zymotics are more frequently associated with rheumatism than others. He then pointed out the localities—tonsil, appendix vermiformis, &c.—which are prone to be attacked by rheumatism, and shewed how they resembled one another in anatomical structure. He did not think that the fact of a particular form of tonsillitis being infectious proved in any way its connection with rheumatism. Considering the ordinary run of cases of acute rheumatism, he found it difficult to believe in their infectious origin when the great variety of their

exciting causes was properly weighed. His own view was rather to consider that rheumatism had much to do with the nervous system. In support of this opinion he quoted the historical case of the man who was cured completely of a severe attack of rheumatic fever by the shock of a railway accident.

DR. GLOVER LYON thought there was great danger in accepting the infectious view of rheumatism because it might and would lead the mind of the profession too much to take note of the micro-organism rather than to consider the varying clinical etiological factors—to consider the seed, in fact, too much, and the soil on which it was sown, too little. It was evident that people—the soil—varied enormously in their powers of resistance or liability to infection. He considered that lowering of the vital powers and general overwork were the two great causes, from a clinical point of view, of rheumatic fever, and in avoiding these lay real prophylaxis. Fatigue in large numbers of people acting simultaneously might make infection seem to be the factor at work.

DR. J. T. FOX said, if there is a micro-organism of rheumatic fever could it not be a similar one to that of malaria? The diseases resembled one another in the fact that one attack pre-disposed to subsequent ones; he mentioned, however, that in Madagascar there was a type of malarial fever one attack of which seemed to confer immunity from subsequent ones. He thought the action of salicylates might in some way run parallel with that of quinine.

MR. HUMPHREYS, in his reply, mentioned a husband and wife, one of whom suffered from an attack of typhoid fever and the other from acute rheumatism from exposure to the same unsanitary conditions. Evidence of infection was, he said, always difficult to obtain, at least of a convincing strength. He admitted that he had seen rheumatic fever arise from an accident in a child with a rheumatic taint.

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OCTOBER 23rd, 1895.

DR. G. SIMS WOODHEAD delivered the second Hunterian Society's Lecture, entitled

“THE PROBABLE LIMITATIONS OF SERUM  
THERAPY.”

MR. PRESIDENT AND GENTLEMEN,—The subject taken for consideration this evening, under the title in which it is defined, savours somewhat too much I am afraid of the profitless and even dangerous task of prophesying before knowledge is complete. Of such ploughing of the sands I should like to steer as clear as possible, though it may be



difficult now and again to express all that one would wish without attempting to forecast the future of what from its very recent introduction into the world of medicine, is still in an embryonic or, at any rate, infantile stage of existence. It may appear, at first sight, that in choosing such a title as that which I have selected, I wish to draw attention to special shortcomings in the method of serum treatment which at some time or other have come under the notice of the many observers who have had experience of its use. Now, though it is far from my intention to shirk the discussion of this part of the question, my desire is rather, this evening, to point out the enormous benefits that have followed the introduction of serum therapy, and to indicate that when properly used we have in Antitoxic Serum a most potent remedy in the treatment of certain specific infective fevers, at the same time pointing out that such serum can never be looked upon as a "specific" for all cases of such diseases. Only its enemies should suggest the making of such a claim for serum therapy; its friends, if wise, will accept its aid in suitable cases, already very numerous, which as the subject becomes better understood will become still more so. At the same time they will recognise the well-defined limitations by which as a therapeutic agent it is necessarily surrounded.

It was one of the great merits of Pasteur's work on the production of immunity by a process of protective inoculation, that he recognised to the full and pushed to its utmost limits the fact, long since widely accepted by earlier civilized peoples, that a single attack of an infective disease usually exerts a distinct power of protecting the patient against a second attack of the same disease. He argued from this that if the specific infective diseases were produced in the body of an animal by the action, say, of specific infective germ, and if these germs could be modified, so that their growth in the body would produce a mild attack, the animal ought to be protected against the attacks of a more virulent germ. We know what was the outcome of his researches on this subject. The facts as facts are now patent to all but the woefully dense or the wilfully ignorant.

When, however, we come to attempt to explain the processes involved in the production of this protection the ground on which we tread is by no means so firm, and it is only after a careful consideration of the material evidence at our command that it is borne in upon us that during the course of an attack of any of certain specific infective diseases, very definite changes have taken place in the tissues of the patient—using this term tissues in its widest sense—which must be referred to the action of the specific virus, associated with the special disease, upon these tissues.

These changes at first sight appear to be of two kinds, but it is at once evident that both may be ultimately referred to the same cause. We have (i) those changes which take place in the cells, and (ii) those that result in the fluids, of the body. As our time to-night is limited and as the theory of phagocytosis has been so fully discussed during the last few years, it is both unnecessary and inadvisable to enter into any dissertation on Metchnikoff's beautiful and attractive theory; we must rather confine our attention to those facts that have a direct bearing on the antitoxic serum treatment of disease.

Some years ago Bouchard pointed out that many of the proteid products of metabolism possess a distinct toxic action. This in itself was a great step in the direction of supplying an analogy between the action of animal tissues and the tissues of plants and bacteria. As regards the latter, Pasteur and his pupils had already insisted upon the importance of the part played by them in the production of disease; they had found, indeed, that in many cases, bacteria relied almost entirely upon their poisonous products to help them in maintaining a parasitic existence in the higher animals. The above fact, in itself of great value, assumed an enormously greater importance when Bouchard found that certain other of these proteid metabolic products have an antidotal effect on the poisonous products, especially when produced and acting in comparatively small quantities. These two sets of products differ markedly in their physiological activity. They may even be produced by the same cell, but they are characterised by perfectly distinct activities. Bouchard

maintained that in the animal or human body, even under perfectly normal physiological conditions, there is a constant production of poisonous proteid substances, which are as constantly neutralised by antitoxic substances, equally the products of the cells; these substances, moreover, he pointed out, are stored up in the blood to be called into use, as occasion may require. If, now, these normal toxins act upon the cells in such a fashion as to excite them to produce antitoxines, by which the toxins are neutralised or rendered impotent for evil, little stretch of the imagination is required to enable us to conceive the possibility that poisons, especially organic poisons artificially introduced, should, when introduced in small quantities and at sufficient intervals over a considerable length of time, so act upon the cells of the body, that antidotal or antitoxic substances are formed, which, stored up in the blood (just as in the case of the purely physiological counterpoison or antidote), may also be brought into play as necessity for their action may arise. Having once grasped this fact, it appears to be a question of minor importance whether the poison be formed by the micro-organisms actually in the body (so long as their multiplication and transition are so restricted that the patient can recover), or whether the toxic products of these micro-organisms, produced in artificial cultures outside the body, be introduced in known and carefully graduated doses; the result should always be the same—the formation of antitoxine, which so long as it remains in the body of the patient, should protect him against the action of even considerable doses of toxine, and should so fortify the cells and tissues of the body that they may be able to carry on their various functions of scavenging and removing foreign particles or even active bacilli, in the presence of what, under ordinary conditions, would prove fatal to the activity of these cells.

Serum therapy, although, to some extent, a purely theoretical system when it was first promulgated, is now firmly based on well authenticated facts and observations. It is based on the work done by Pasteur and Koch in



connection first with the etiological relationship of specific germs to the infective diseases, and, secondly, with the production of immunity by means of protective inoculation with a modified virus—first of the micro-organism itself and then of the poison formed by it. It is even now only eight years since Salmon and Smith advanced the subject a great step by proving that, just as the products of active or virulent bacilli could induce very severe symptoms of specific poisoning, so the products of attenuated bacilli, if injected into an animal, can confer a degree of protection against the action of virulent bacilli almost if not quite as great as that conferred by the injection of the attenuated bacilli themselves. About the same time another most important observation was made by Sewill, who showed that an immunity could be acquired even against virulent cobra poison by a process of gradual acclimatisation of the cells to the presence of this poison. In this case, of course, we have not to deal with micro-organisms at all, but only with a toxin formed in the system as a result, as Bouchard would hold, of a perfectly physiological process. Attention was soon called to another fact which was destined to play a very important part in the development of serum therapeutics. Von Fodor demonstrated that blood when drawn from the body had a distinct bactericidal action, which, as was soon shown by Nuttall and others, although it might be connected with the corpuscles of the blood, was not confined to them because the serum separated from freshly coagulated blood was found to contain some proteid substance which exerted a powerful bactericidal effect. A couple of years after Von Fodor had published his discovery Babes and Lepp announced (July, 1889) that the blood of animals (dogs) which had been vaccinated against rabies exerted a distinct protective action on susceptible animals when injected either before or along with the virus from a rabid animal.

From this time forward the development of the theory of serum treatment advanced by leaps and bounds. Ferau, Bouchard, Behring and Kitasato, and others in rapid succession, pointed out that there was stored up in the serum

of the blood of animals vaccinated against certain of the specific infective diseases (tetanus and diphtheria), a distinct prophylactic curative substance which although it could not, at that time be separated from the serum, was proved to possess extraordinarily active properties.

As early as 1891 diphtheria patients were treated in Berlin with antitoxic serum prepared by Behring. This serum contained very little of the antitoxic substance, and it was impossible to give sufficient quantities to obtain results at all comparable to those almost invariably obtained in the laboratory, but they were so far satisfactory that they justified a more extended trial of the antitoxic serum in cases of diphtheria. Behring and Aronson in Germany, and Roux in France, were, however, soon able to obtain this extended trial, with the result that almost every physician, who had previously had any large experience of the treatment of diphtheria, and who had an opportunity of trying the antitoxic treatment on a large scale, pronounced distinctly and unhesitatingly in favour of the treatment over all others, in so far that they considered that it improved the general condition of the patient, rendered tracheotomy less necessary and diminished the death-rate in a most marked degree.

You are all familiar with the process of the manufacture of Diphtheria Antitoxine by the injection of gradually increasing doses of Diphtheria Toxine into the sub-cutaneous tissues of a large animal, sheep, goat, or horse, preferably the last, because of the ease with which large quantities of serum may be obtained from his blood. The same principle obtains in the cases of Tetanus and Rabies Antitoxine, though the details in these two differ slightly. It is evident from a consideration of the conditions under which the tissues become poison-proof and antitoxine is formed, that the production of immunity and antitoxine formation, though they often go on together, do not necessarily run on exactly parallel lines, for it is undoubtedly the case that an immunity may remain after the power of forming antitoxine has been lost. It would appear, indeed, as though the production of antitoxine in an animal or

in man must be looked upon as the result of an attempt on the part of the tissues to delegate to something produced by themselves part of the work which otherwise they would constantly be called upon to do, their attention being thus diverted from their proper work. It is, however, perhaps a more or less temporary expedient, and we find that if the amount of antitoxine in the blood is to be kept at a high level, a large amount of toxine must from time to time be injected into the animal in order that its tissues may be directly and constantly stimulated to produce the antagonising or neutralising substance. That the tissues can withstand the action of enormous quantities of poison, or rather can carry on their functions in the presence of such quantities when they are aided by the presence of antitoxine, may be gathered from the fact that after a horse has been under treatment for some time, 500 to 2,000 (or even more) times the dose that can be given at first may be injected, and the local and temperature reactions—the measures of effect on the tissues—are no greater than they were in the first instance. This indicates that the antitoxine present is capable of neutralising either directly or indirectly the action on the tissues of this enormous quantity of poison.

It is sometimes a somewhat difficult matter to convey in words the activity of a poison, but when we can take a lethal dose of poison as a standard it is possible, by means of multiples, as in Ehrlich's method of testing, to indicate with some approach to accuracy the activity of antitoxine. I will give an experiment as an example.

Take a toxine which is found to kill a guinea-pig of a certain weight in a certain dose—say, .1 c.c. will kill a 250 gramme animal in two days. To 1 c.c. or *ten* lethal doses of this toxine, add 1/100, 1/500 (or even less, according to the antitoxic strength of the serum), of a drop of antitoxic serum of the strength sent out for the treatment of diphtheria patients, and inject the mixture subcutaneously into a guinea-pig of the same weight as that which was killed by a single lethal dose. The animal remains perfectly well. There is no swelling at the seat of injection,



little or no rise in temperature, and the animal eats well, in fact there is no evidence of any kind that any toxine has been injected. This minute quantity of antitoxic serum, then, is quite sufficient to neutralise such an enormous dose of the poison that if divided up and given alone it would be sufficient to kill ten guinea-pigs.

It cannot for a moment be supposed that antitoxic serum of this strength is ever produced during the course of an ordinary attack of diphtheria, but in those cases that recover, it is evident that the antitoxine formed under the stimulating action of the toxine absorbed from the false membrane in the throat must be sufficient in quantity to enable the patient to throw off the disease by "antagonising" some of the poison formed and thus allowing the tissues to carry on their proper work. It is, moreover, quite evident that even those people who object in theory to the introduction of antitoxic serum into patients affected with diseases in which the antitoxic treatment has been successful, cannot, fortunately for themselves and their children, prevent this method of treatment from coming into play during the course of the disease. If the patient is to recover at all, antitoxine must and will be formed then playing a most important part in subduing the disease.

What then is the value of this antitoxic serum as a therapeutic agent? If under such definite conditions it can protect an animal in which it is formed—experimentally, we may say,—against such an enormous dose of poison artificially introduced, should it not also protect and cure when introduced into an animal, and therefore a human being, in whom poison is being formed, and if so, should it not act as a specific in every case in which it is used—if not, why not?

At the outset it may safely be affirmed that antitoxic serum when used experimentally does act, not only as a curative, but also as a protective agent. In the case of true diphtheria, which may be taken as our example, both because we have most of us had more experience of the use of antitoxic serum in this disease than in the other two for which a protective serum has been recommended—Tetanus and Hydrophobia—we have at first a purely toxic condition, as the patient is

practically poisoned by the products of the diphtheria bacillus which are absorbed from the mucous surfaces. These poisons, if present in large quantities and thrown rapidly into the system instead of stimulating the tissue cells, so that they are enabled to react and form the counterpoison, overstimulate and paralyse them. Following this over-stimulation, degenerative changes take place, especially in the more highly developed cells. The nerves become degenerated, so that distinct breaks are made in their conductive continuity, the muscles, especially those associated with constant and delicate movements, undergo fatty degeneration and therefore fail to act when called upon to do even an average amount of work; and the secreting cells of the kidney become cloudy and granular, from which it is evident that the action of the poison on this organ is so profound that it is no longer able to carry on its function in a healthy and regular fashion. Now, if the antitoxine can be brought into play before these changes have had time to develop, is it not evident that the results must be less marked if the tissues are able to carry on their ordinary functions without hindrance, as we know they undoubtedly can when antitoxine is present in the blood of our experimental animals, even in the presence of large doses of toxine? These tissues do not become paralysed or degenerated, and the organic changes so much dreaded by the physician do not make their appearance. It is a great matter in these cases that the patient should not be kept waiting for the manufacture of the protective substance to go on within his or her own body. When antitoxic serum is injected the patient receives the benefit of the immediate action of a protective substance which has been slowly built up in another animal organism. No time, energy, nor tissue-waste is expended in the production of the antitoxine, and the patient is so much the gainer. This question of time is perhaps one of the most important factors in the whole process.

Antitoxic serum can only effect a "cure" when it is introduced so early in the course of the disease that it is enabled to fully neutralise the action of the toxine

before this latter has had time to bring about the degenerative changes to which reference has above been made. The further advance of the disease may be checked, but nothing that we can do will enable nature to make good, immediately, the structural changes that have been effected in the organs and tissues. We may keep our patient under the most favourable conditions so that he may not succumb under pressure of work thrown on the damaged organs, and we may stop the further degenerative changes by inhibiting or neutralising the activity of the causal agent, but beyond this we can do little. All this I maintain, however, points most directly to the absolute necessity there is for the early exhibition of a remedy which will do so much.

If, as some suggest and even demonstrate by experiment, the degenerative changes commence as early as the third day and increase progressively until the patient dies on the one hand, or, on the other, antitoxine formation intervenes in sufficient degree to enable the tissues to cope on equal terms with the bacilli, how important must it be to commence treatment at the earliest moment possible; though from the fact that the degenerations continue to become more marked every day, there seems to be little limit to the period at which the hope of effecting *some* good, however slight, should be abandoned. It must, nevertheless, be recognised that however true this may be, we can never expect to save anything like the same proportion of "old" cases that come under treatment, as of those that can be grappled with at the very commencement and earlier stages of the disease.

The only "early" cases that we should expect would resist serum treatment are those in which the amount of poison suddenly produced is so large, that it is sufficient to paralyse the cells and tissues almost immediately, striking them down beyond recovery by its intense activity. In such a case we may as well attempt to whip a dead horse into offensive action, as try to get the tissue cells to react by means of the introduction of antitoxic serum. The poison *may be partially* neutralised, but for all the results that we can expect, we



might as well do the neutralisation in a test tube and expect a reaction on the part of the glass.

It must be borne in mind, however, that the balance in the struggle between the bacilli and the tissues is held very evenly, and that in many cases a very slight matter may tilt the scale in either direction. That help is thus often given by antitoxine there can now be little doubt. This question of time may be easily proved by laboratory experiment. If a dose of diphtheria toxine, sufficient, if divided among ten guinea-pigs, to kill them all within two days, be injected into a single guinea-pig after or along with sufficient antitoxic serum, the animal as we have already seen remains perfectly well. There is no swelling, little rise of temperature and the animal eats well ; in fact, it remains free from all symptoms of poisoning. If now, instead of injecting the two substances simultaneously, the toxine be injected before the antitoxic serum, the animal will die unless the dose of antitoxine be increased ten, twenty or even a hundred times, by which large dose, however, the animal's life may be saved. If, now, in an experiment, the toxine be injected 48 hours before the antitoxine, a dose of a hundred or even more times cannot prevent the death of the guinea-pig, in fact no dose, however large, is sufficient to hinder this. In the case of tetanus the difference is even more marked ; it may be necessary to inject 10,000, 100,000, or even a million times the prophylactic dose in order to ensure the recovery of a tetanic animal that has once fully developed the disease.

In practical medicine such enormous doses are absolutely out of the question. It follows, therefore, that in suspected cases and mild forms of disease, antitoxin should be given at once, before the toxine, if present, has had time to exert its pernicious powers on the tissues which are specially affected by its action. It is for this reason that the treatment of diphtheria by antitoxic serum is so much more encouraging than the similar treatment of tetanus. What is the main point of difference between the two cases, and how is it that in one the success of the treatment has been astounding, whilst in

the other little but failure has been reported? Again it is a question of time.

When the clinical and experimental results obtained in the treatment of tetanus are placed side by side, it is evident that we have an explanation offered in the fact that in experimental tetanus the serum may be given before or immediately after the introduction of the toxine, whilst in the cases that come to us for treatment the toxine has produced grave changes in important tissue elements before the disease can be said to have actually developed itself. The mischief has been done before we are called upon to treat the patient. In the case of diphtheria the above-noted successful treatment by serum may be accounted for by the fact that we are often, and should always be, called upon to treat the disease at its initial stage, almost from the commencement of the poison production. Fortunately for the patient, the presence of the diphtheria bacillus is at once manifested by the action of its poison on a sensitive or abraded mucous membrane, so that in the first stage of the disease the local lesion assumes far greater prominence than the general toxic symptoms, and we are therefore enabled to introduce the remedial serum into the system almost as soon as the poison can be absorbed from the local lesion, whilst, with the aid of cultivation and staining methods, it is possible, in a very large proportion of cases, to make absolutely certain of the presence of the specific poison-forming bacillus at a very early stage of the disease in almost all cases of true diphtheria.

If such treatment be successful in early cases of diphtheria and before or immediately after infection with toxins in experimental tetanus and diphtheria, should we not look hopefully to the use of antitoxic serum as a prophylactic agent? A comparatively small dose,  $\frac{1}{4}$  (200 or 300 units), of the smallest curative dose of anti-diphtheritic serum, is sufficient to protect a patient against an attack of diphtheria, even though he should be fully and constantly exposed to infection. Such protection lasts for three weeks or a month only, but that is usually sufficient to allow of isolation, disinfection, &c. So good are the results of protective

treatment wherever it has been tried in diphtheritic outbreaks and in institutions where large numbers of young people have been exposed to infection, that I for one should not hesitate to use or to recommend the use of antitoxic serum as a protective agent wherever children have been or are likely to be exposed to the infection of diphtheria. In the case of tetanus I fully anticipate a time when every patient suffering from a dirty, bruised wound, or a wound in which a splinter of wood, a rusty nail or any fragment in which dirt can be harboured, will, as a matter of routine, be injected with antitetanic serum, in order that should any tetanus toxine be formed in such a wound, its action may be counteracted at once, and the organic changes which are set up by the toxine in the ganglion cells—and which once set up no amount of antitoxine can make good—can be prevented. We have here results which justify the system adopted by the English residents in China, in which the doctor is paid to keep his patients in good health as well as to treat them when they are ill. Let me again repeat that antitoxine may prevent degenerative change, but it cannot repair the lesions in the tissues that have undergone such change—that is a work which must be left entirely to the *Vis Medicatrix Naturæ*, whose place can never be taken by drugs or medicaments, however potent they may be to counteract poisons and relieve immediate symptoms.

Some writers appear to think that the antitoxic serum, to maintain the reputation claimed for it as a therapeutic agent, should altogether do away with the paralysis which is so common a sequela of diphtheria. This, on the face of it, is unwarranted. In those cases in which nerve and muscle changes have taken place before the toxine is neutralised by the antitoxine, we may expect evidence of these changes to make their appearance. From the very fact that a number of cases recover which, under the old methods of treatment would have succumbed at an early stage of the disease, the number of cases in which paralysis is present may even be increased ; these paralyses and other complications will, by



unthinking people, be attributed to the remedy and not to their proper cause, the disease.

It is to be feared, too, that in some instances abscesses *have followed* the injection of antitoxic serum. It is not either just or reasonable, however, to lay the blame of such result at the door of the serum. In many cases it can be traced directly to the use of a dirty (imperfectly sterilised) syringe. Here let me insist that I would rather not see the antitoxic serum used at all than see it used in a slovenly fashion and without the use of most stringent antiseptic precautions. At the same time these abscesses are purely accidental and have nothing to do with the serum as serum. Whilst on this subject, I may perhaps mention the fact that some of the abscesses met with have been actually traced to accidental contamination of the serum with organisms from without. How these gain access to the serum may be readily imagined, for the greatest care has to be exercised to keep the serum from contact with unfiltered air or with apparatus, bottles, corks, &c., that are not scrupulously clean. In certain samples of serum experimented with to prove this point, I have found thousands of organisms after the bottle has been left open for a few days, and I know of at least one and probably two abscesses that have been traced to the use of antitoxic serum that had been exposed to the air for a short time whilst a dose was being taken from the bottle, and then left for some time before the remainder of the contents of the bottle was used. This difficulty has now to a certain extent been got over by adding a sufficient quantity of an antiseptic—carbolic acid or tri-kresol—to prevent the multiplication of micro-organisms in the fluid. The quantity of antiseptic so added must be a minimal dose and not sufficient to set up local irritative changes and so predispose to abscess formation; large doses would readily do this. In the same way all solid fragments of *any kind* and however small should be rigidly excluded from the syringe. Of course such solid bodies should never be present, but it is found that in some few cases filaments and flocculi of coagulated fibrin form and fall to the bottom or float to the surface of the separated

serum. These should always be left in the bottle, as, if injected, they are not so readily absorbed as the fluid and may afford a nidus for micro-organisms, should such find their way in at the puncture. All these things may with care and attention be avoided, but they must be classed amongst the limitations of the antitoxic treatment, only in so far, however, as they render the utmost watchfulness necessary in guarding against their entrance.

Another warning must be given to those who, perhaps, are inclined to be too hopeful concerning the results of this method of treatment. It must not for one moment be accepted that the cure of diphtheria can be reduced to a mere process of injection of antitoxic serum. The case must be most carefully watched, and every symptom should be treated as early as possible. At the same time everything must be done to improve the conditions under which the patients are treated, to maintain their strength, to give them fresh air, cleanly surroundings and good general hygienic conditions. The utmost rest and quiet, both bodily and mental, are still absolutely necessary, and all precautions must be taken to obtain these for the sufferer. It will be found, however, that, whatever may be done, a certain number of deaths from rapid poisoning will occur, whilst a number of cases will succumb in the later stages of the disease. Antitoxic serum can no more act as a specific in every case of diphtheria than can quinine be relied upon to cut short every case of malaria ; but just as we do not for this reason discard quinine in the treatment of malaria, so we cannot discard antitoxic serum in the treatment of diphtheria, for beyond all dispute, if properly used, it modifies and often even aborts the attack and will, I believe (even in this country where the mortality is already comparatively low), reduce the mortality from diphtheria in a very marked degree. If, at the same time, those practical sanitary reforms and improvements for which our country is so justly renowned are carried out, we may expect that diphtheria as a scourge may gradually be exterminated from our midst. I hope shortly to see our diphtheria mortality fall to below 20

per cent. in our large hospitals, and in the course of a few years to below 10, whilst in private practice, where cases are seen comparatively early, this latter figure should be reached in a year or two at the outside.

It has been maintained by some authorities that the antitoxic serum exerts a definite bactericidal action ; in consequence many people have come to the conclusion that because diphtheria bacilli do not disappear from the throat almost as soon as an injection of serum has been made, it is probably of little value. Most of those who have paid special attention to this question, however, are now convinced that antitoxic serum does not act directly upon the bacilli of the disease under observation, but upon the cells that are usually attacked by the toxine or by the bacilli. How it acts has not yet been demonstrated, but it may be taken for granted that it does so in one of two ways. There may be a neutralisation of the poison by the antidote, this neutralisation being due to a kind of chemical action or interaction between two substances which are mutually destructive. In support of this theory has been brought forward the fact that there appears to be a more or less definite relation between the quantity of poison developed, and the quantity of antitoxin that it is necessary to introduce, in order that the former may be completely neutralised. This is certainly a most marked feature where guinea-pigs are being experimented upon. Then, too, there is the fact that when an animal has received a certain measure of protection against the action, both local and general, of large doses of toxin, this protection is almost invariably proportional to the amount of antitoxin that is present in the blood. Of course, against this, it must be urged that the neutralisation is not chemical merely because these two substances are brought into contact with one another in the fluids of the body. It may well be that those are right who hold that the antitoxine acts directly upon the tissue cells of the body, stimulating and strengthening them so that they are able to withstand the attack of the toxine, for the resisting power lying in the cells is proportional to the amount of



special stimulus that is brought to bear upon them. It is only on this latter assumption that we can account for the fact that a certain small percentage of cases treated appear to derive little or no benefit from large injections of antitoxic serum even when the degenerative changes so frequently associated with tetanus and diphtheria, for example, have not had time to develop. Lister long ago pointed out that in order to obtain a stimulating effect on protoplasm, two things were necessary—(a) a suitable strength of stimulus, and (b) sufficient vitality or reacting power in the cell. If we take diphtheria as our example it is easy enough to see how necessary it is to bear in mind these two points when discussing the reaction of living cells to toxine and antitoxine. In the first place, in extremely virulent cases of diphtheria, the amount of toxine absorbed from the fauces may be so great that it may be a difficult matter to throw into the patient a sufficient quantity of antitoxic serum in a short enough time to counteract its effects, *i.e.* to stimulate the cells so that they can carry on their work in the presence of the toxine. Unless this stimulus be sufficient in quantity and appropriate in character, we cannot expect to obtain results that will be satisfactory to patient or to doctor. Beyond this, however, it is evident that the cells themselves must be able to react properly to the antitoxin when brought into contact with it. Welch says,\* “For one reason or another this responsive power may be in abeyance. It may be weakened by intense or prolonged action of the diphtheria poison or by other previous or co-existent disease or by inherent weakness, or there may even be some individual idiosyncrasy which hinders the customary response of the cells to the antitoxine.” He goes on to say—and this certainly seems to be the experience of most physicians who have used antitoxic serum—that “clinical experience shows that cases of diphtheria inherently refractory to timely treatment with antitoxic serum are most

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\* “The Treatment of Diphtheria by Antitoxin.” Trans. of the Assoc. of American Physicians. Vol x., 1895.

exceptional, if indeed they occur at all." We may therefore conclude that the limitations as regards the use of this drug are mainly of two kinds, time and quantity. Of the former we have already spoken, on the latter it may be well to say a few words.

One of the great difficulties experienced by medical men in private practice was, for long, to obtain antitoxic serum in sufficient quantity to treat their cases when required, and even when obtained it was of such strength that enormous doses had to be given in order to administer a full dose of the potent agent contained therein. All Behring's and Roux's earlier experiments on diphtheria were made with serum that contained only some two or three hundred immunisation units in each dose of 20 c.c. As experience of the treatment was gained it was found that the best results were obtained when comparatively large doses—600 to 1,500 immunisation units—were exhibited. Now, however, many physicians think it necessary to give even larger doses. It is evident that if such amounts of antitoxine are to be given, the strength of the serum must in some way or other be considerably increased, 1st, in order that larger quantities may be obtained from each animal giving the serum, and 2nd, in order that it may not be necessary to inject subcutaneously such large quantities of fluid that the feelings of the patient or the susceptibilities of the patient's friends may be hurt. This is a most important point, as many practitioners who would not hesitate to inject 5 c.c. of serum would, unless firmly convinced of the efficacy of the treatment, shrink from introducing 40, 60, or 100 c.c. The one would be a simple and painless operation, the other a tedious and often even a painful process. The average strength of serum now supplied from the German laboratories is supposed to contain 1,000 units in 10 c.c., and we must certainly aim at obtaining a supply of serum of at least that strength. In this matter we may confidently look for great improvements; during the last few months the strength of the antitoxin supplies both in this country

and abroad has been steadily rising, and we need not despair of obtaining serum of such strength that 4 or 5 c.c. will contain at least 1,000 units, in which case 10 c.c. would contain a quantity sufficient for the treatment of even the most severe cases.

It is often stated that anti-diphtheritic serum is of little value in those cases of diphtheria in which, along with the specific bacillus, Streptococci are found in large numbers. At one time I was inclined to accept the apparent failure of the remedy to afford relief in such cases as final and conclusive on this point. I must say, however, that I now believe that even in these cases the serum may be used with very great advantage. The diphtheria poison is a most powerful acrid irritant; at the point at which it is absorbed after being manufactured by the bacilli, it undoubtedly has a most potent action on the cells, devitalising them, depriving the epithelial cells of their power of protecting the throat, and the connective tissue cells and leucocytes of their phagocytic function. As a result of this, the streptococci associated with the formation of pus, or with the erysipelatous condition, are enabled to invade the tissues and so set up septic processes, both in the throat and at a distance. If, however, the antitoxine protects the cells against the diphtheria toxin or enables them so to react in its presence that they are able to perform their several functions, the streptococci are prevented from invading the deeper tissues and are rendered powerless for evil. It is for this reason that antitoxic serum may be given in all cases of throat mischief where the presence of the diphtheria bacillus is suspected. It can do no harm in any case, whilst in pure or mixed cases it may do an enormous amount of good.

It has been affirmed that the presence of certain processes—such, for example, as the tubercular—in a patient distinctly contra-indicate the use of antitoxine. There can be no doubt that tubercular patients treated with antitoxic serum do not get on so well under this treatment as do those who are unaffected with the disease, but the same may be said of all cases of diphtheria in tubercular patients, whatever the treat-



ment resorted to. We have yet to learn how far the serum treatment of itself lights up or stimulates latent tubercular processes. What the physician has to decide in such cases is, can the patient recover without the use of antitoxine—or rather, are his chances of recovery so much greater when antitoxine is used that it is worth while to run some risk of evil consequences from the action of the serum on the tubercular lesion. In most cases the risk is, I should say, worth running, but in some this may not be the case. These cases are exceptional however, and it is evident that no hard and fast rule can be laid down. The physician will have to decide each on its own merits, and there, for the present, the matter must be left.

Now, Gentlemen, there is one slight drawback in this method of treatment to which we must not close our eyes. If we recognise it we may forestall it, but if we ignore it we may not be prepared to overcome it.

Serum treatment is in no sense of the nature of a *vaccination*, and when once the immediate or temporary effects of the antitoxine have passed off, the tissues may be in very little better position to resist an attack of diphtheria than they were before the attack. Allow me to use an illustration. In certain cases we have to give pepsin to a patient in order to tide him over a temporary weakness of the digestive apparatus. Whilst we are doing this, however, we are using every means at our command to get up the strength and general condition of our patient as we know that should we continue to give the pepsin for too long a period, we may bring the gastric cells so to rely upon this extraneous help that they will discontinue the formation of pepsin on their own account. Exactly the same thing appears to happen when antitoxine is injected. This substance acts so efficiently that the tissue cells do not take the trouble to act for themselves and form their own antitoxine, so that when the effects of the introduced antitoxine have passed off they are no longer protected, and if the source of infection has not been removed, another attack may result. The remedy for this, however, is so obvious and its bearings on practical hygiene are so important that it is not necessary to do more than mention this fact.

Gentlemen, I might go on for some time on this fascinating subject ; I might speak of the degenerations of the tissues that occur in those cases where the disease, though apparently of a mild type, leads to most marked degenerative changes, I might describe those changes in which, although the enzymes are neutralised, the poisonous albumoses still appear to exert some malign influence on the tissues. I might give you elaborate tables of the results obtained in the worst cases, *i.e.*, where intubation and tracheotomy have to be resorted to, and I might give you masses of details of experimental work, but I could not convince you of the value of antitoxine in diphtheria one-tenth so quickly as you will be able to convince yourselves by using it in the first case of diphtheria that you are called upon to treat. Give it early enough, *i.e.*, before the degenerative changes in nerve and muscle have had time to be set up, and give it in doses large enough to antagonise the whole of the toxin that can possibly be formed (2,000, or, if necessary, even 3,000 immunisation units) and so far as human foresight can go, I can promise you results that you have scarcely dreamed of. Cases are described in which it has acted as if by magic and you will see the same thing if you are not afraid of giving sufficient doses. The antitoxic treatment is most closely associated in our minds with diphtheria, but tetanus and rabies and even cholera and typhoid fever are already coming within its influence, and at present we cannot say in what diseases this principle of treatment may not be applied. At present the treatment has its limitations, but they are limitations which in most cases are sharply defined and may probably be removed as our knowledge of the nature of the processes involved becomes more extensive and more accurate.

Before I close I should like to say one word on the tremendous responsibility assumed by those who oppose this method of treatment. Those who are most actively engaged in picking out the drawbacks to the use of antitoxine find that their occupation is becoming lighter and lighter. Improvements in the process of manufacture are gradually

diminishing the bulk of the dose, the rashes and joint pains are less frequently met with as following the exhibition of the serum. Many of those to whom the "brute force" of figures carries little conviction are gradually giving way as they follow the course of diphtheria cases in private practice and in hospital wards ; and now it is impossible to excuse even ignorance on this question. The wilfully ignorant have as much responsibility to bear in this matter as have those who deceive others. So firmly am I convinced of the value of this treatment that I consider that those who have the facts before them and still refuse to go into them or to try the treatment, are really guilty of what in some cases amounts to manslaughter. This may sound strong language, but sometimes strong language is all that will meet the requirements of the case. I am sure, Gentlemen, that in this matter none of you will misconstrue my meaning.

Such, Gentlemen, in very brief outline, is a synopsis of the most recently written chapter in the history of medicine. How recent it is may be gathered from the fact that the civilised world but now mourns the loss of the moving and guiding spirit, the great organiser of the work that is recorded therein. To us, as medical men, no meed of honour, that can be accorded to Pasteur and his work, seems too great. Pasteur, like the Red Cross knight of old, though not specially trained in deeds of knightly skill in medicine and surgery, was possessed of strength and skill and courage so great and so high that all men acknowledge the grandeur of his achievements in the battle waged against disease and death. Never has man acquitted himself more nobly. He was too great a man to belong to any one school of science, and whilst for the sake of our profession regretting that he was not one of "ours," we rejoice that he belonged to a still greater school in which each one of us strives to learn some lesson, new or old. Our great countryman (John Hunter's successor and Pasteur's co-worker), Lister, is still with us, and in honouring the name of one we mete out honour to the others. The younger men who are still working are legion. Surgery is no longer a mere handicraft, it is a noble



art and a living science. Medicine follows hard in its wake. The new shoots of experimental work grafted on to the root stock of careful observation and long and wide experience, promise to blossom and bear abundant fruit. Some of the first fruits it has fallen to our generation to garner and enjoy, though these can be but a foretaste of the abundant harvest that is to follow.

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November 13th, 1895.—Clinical Evening.

CONGENITAL ATAXIA.

*Case shown by Mr. Campbell M'Donnell.*

MR. CAMPBELL M'DONNELL showed a case of congenital ataxia in a boy aged six years. Family history unknown. Parents dead ; his mother was in labour with him for three days and was finally delivered by forceps. When three weeks old he had epileptic attacks which ceased when he was two years ; he now has paroxysms of combative passion. He is a pale and delicate-looking child with marked enlargement of his epiphyses and much beading of the ribs ; but no talipes or spinal curvature evident. Mentally he is thought to be sharp, though his education has been neglected ; on the motor side there is a clumsy and uncertain movement of arms and fingers when attempting to pick up a small object and the fingers are held in a clawed position at the time, his walk is markedly ataxic even when supported, and without support he is totally unable to progress ; tactile and thermal senses are present, and there is appreciation of painful impressions ; superficial and deep reflexes of lower limbs are present and brisk ; the pupils react to light and there is no nystagmus, optic discs not well seen, so their condition is doubtful ; the faculty of speech is too limited to deserve description.

DR. M'DONNELL remarked that of 16 cases of Friedreich's disease, reported by several observers, the Patella Tendon reflex was absent on both sides in 13, absent on one side and present on the other in one,

while of the three cases in one family reported by Dr. M. J. Nolan in the *British Medical Journal* of 1895, the knee jerks were lost in one, exaggerated in one, and exaggerated with ankle clonus in one, and hence he could not accept the statement that the presence of the knee jerk was fatal to a diagnosis of Friedreich's disease.

SIR HUGH BEEVOR remarked on the absence of any deformities in the case and hoped that the improvement of the last year might be maintained.

## EXCISION OF TEMPORO-MAXILLARY JOINT FOR UNILATERAL ANKYLOSIS.

*Case shown by Mr. Targett.*

The patient was a boy, aged five years, who was admitted to the Evelina Hospital for inability to open the mouth. His family history was unimportant. As regards previous illnesses, the mother stated that the boy had had measles about twelve months ago, and this was followed by inflammation of the lungs. A discharge from the right ear succeeded to the pneumonia, and at that time the mother first noticed the boy had a difficulty in opening his mouth. At the time of admission, therefore, the jaw symptoms had lasted about six months.

The boy had been taken to St. Bartholomew's Hospital where some "operation" had been performed, but the mother said he got no better. Probably the jaw was opened with a gag, for there were no signs of any cutting operation having been performed.

On admission the boy was found to be healthy in all respects except for the condition of the mouth, which was firmly closed. The lower dental arch was ankylosed in the normal position of closure, the lower teeth behind the upper, and without lateral deviation of the median plane of the jaw. There was some thickening and loss of normal outline of the right temporo-maxillary joint, but the opposite articulation seemed healthy. He took chiefly liquid food, but had learnt to insert small pieces of meat between the teeth in the gap formed by the overhanging upper dental arch.

An anæsthetic was administered with a view to opening the mouth forcibly by means of a gag. It was found, however,

that sufficient space to introduce a Mason's gag could not be made, and the efforts at doing so merely resulted in loosening one or two teeth. As no permission had been obtained to perform an operation, the boy was taken back to bed.

On a subsequent occasion it was determined to divide the neck of the condyloid process of the inferior maxilla on the right side, and, if necessary, on the other side also.

An anæsthetic having been given, a T shaped incision was made over the right joint, the transverse cut being at the lower border of the zygoma, and the vertical cut along the posterior border of the jaw.

Much difficulty was experienced in clearing the soft tissues from the condyle owing to inflammatory thickening. The division of the neck was likewise a laborious business, requiring the use of an osteotomy saw, as well as a chisel and cutting forceps. It was afterwards seen that the bone here was unusually dense.

When the section of the neck of the condyle had been completed, it was at once seen that very little good had been effected. Not more than a quarter of an inch interval between the upper and lower incisor teeth had been gained. As the opposite joint was clearly unaffected, nothing remained in the way of operation but complete removal of the right condyle from the glenoid fossa. This was done by means of an elevator and lion forceps. The head came away in two pieces. It was barely recognisable, the articular cartilage had disappeared, the margin was enlarged, and there had doubtless existed very close fibrous union between it and the glenoid fossa. The lower jaw would now open freely enough. The wound was sutured and dressed. The subsequent progress of the wound was uneventful, for it healed very rapidly by primary union. The only ill effects resulting from the operation was paralysis of some of the branches of the facial nerve, those supplying the orbicularis palpebrarum, and probably the buccal branch. In the course of a few weeks this paralysis considerably improved, and at the present time (about  $3\frac{1}{2}$  months after the operation)



the eyelids can be closed effectually and there is very little difference between the two sides of the face.

As regards movements, the boy can protrude the lower jaw in front of the upper ; there is no lateral deviation of the median line of the jaw ; and the upper and lower incisor teeth can be separated for seven-eighths of an inch. He has plenty of power and inclination to eat a hard apple.

MR. SYMONDS congratulated Mr. Targett on the result of his operation which seemed to be practically perfect. He asked what was the cause of the ankylosis.

### NYSTAGMUS.

*Case shown by Dr. J. H. Sequeira.*

The patient, a girl of eleven, has been under my care at the North Eastern Hospital for Children since the 2nd September, 1895, suffering from nystagmus.

The mother, who is of neurotic temperament, gives the following history :—She has had four children, of whom three survive. One, a boy, who is “delicate,” one girl, quite well, and the patient. The other child died when three months old of “collapse.” There were no miscarriages. There is no history of tubercle in the family, and no reason to suspect syphilis.

The patient, who is an intelligent child, and in the 5th standard at school, was anæmic and rather thin, when first seen. The facial expression and the teeth are in no way suggestive of congenital syphilis. When two years old, she had what her mother describes as a “stroke,” by which I presume a fit is meant. The illness did not last long, but subsequently it was noticed that the child’s mouth was drawn to one side and that her eyes twitched.

Some years later she had measles and whooping-cough, but has otherwise enjoyed good health.

When first seen, the child was obviously nervous, and her hands showed slight choreiform movements. The left side of the face is paralysed. Both eyes are affected with nystagmus. The left eye moves upwards and inwards, the

movements having a considerable range. The right eye has a rotatory nystagmus. This is of much less amplitude than the movement on the left side. The pupils are unequal, the left measuring six millimetres, the right four millimetres. With the left eye she can count fingers, but cannot read. With the right eye she reads fairly, vision on that side is  $\frac{6}{12}$ . On account of the movements, the left fundus oculi is seen with some difficulty. There is a deposit of pigment on the back of the left lens. It lies at the periphery. The disc is pale, atrophic. There are also scattered masses of pigment at the fundus. On the right side, the back of the lens shows a network of pigment. The disc is also pale, and pigment is found at the fundus. The field of vision on the left side is contracted.

The knee-reflexes are present.

The hearing on both sides is good.

In this case there are, I think, two elements.

*First*—A congenital double nystagmus, due to the aberrant pigmentation of the lens.

The second element dates from the fit nine years ago.

Optic atrophy and facial paralysis suggest some coarse lesion, such as a tumour or meningitis affecting the base of the brain. It is difficult to see how in a meningeal affection, damaging the facial nerve, the auditory which lies in anatomical contact with it, could escape. Similarly if the facial nucleus at the floor of the fourth ventricle be the seat of the disease, it is difficult to see how the contiguous sixth nucleus is not affected.

Facial paralysis in children is nearly always due to ear trouble, but here we have none. Congenital syphilis practically never affects the facial. It is difficult at this date to suggest a cause for the condition, which evidently now is not progressive. We see only the effects of a damage done years ago.

The question of prognosis is, of course, the chief point of interest to the patient and her friends, and I think we may safely conclude that although there is no likelihood of any

material improvement, there is also no evidence that the disease will advance. Acting upon that view, and knowing that treatment by iodide of potassium has produced no appreciable benefit, I have been content with improving the general health.

DR. ETTLES asked if the child complained of any dancing movements of objects looked at; remarking that in congenital nystagmus no such complaints were made, but they did arise when the affection was acquired, hence the point was of value in differential diagnosis.

SIR HUGH BEEVOR asked whether the appearances found in the fundus of the eye were compatible with old tubercular disease of the choroid; if so, he suggested that possibly tuberculosis might have caused the condition of the eye and also the nervous paralysis, and the case be one of recovery from tubercular meningitis.

MR. SYMONDS asked for an explanation of the inequality of the pupils.

In reply DR. SEQUEIRA said he knew but little of damage to the choroid due to old tubercle: dancing of objects was not complained of: he thought the inequality of the pupils was due to atrophy of one optic nerve.

## HORIZONTAL NYSTAGMUS.

### *Case shown by Dr. Ettles.*

DR. ETTLES showed a case of horizontal nystagmus cured by correction of astigmatism. The case was that of a little girl aged four, who from birth had suffered from nystagmus. Atropisation and skiascopy showed the presence of hypermetropic simple vertical astigmatism of 4 dioptries.

After wearing the cylinders for a week the nystagmus had disappeared. It recurs when the child is excited or on removal of the glasses.

As the case had been seen by others and pronounced hopeless, it taught us to hold a decided prognosis in reserve until any existing Ametropia was estimated and corrected. The case is explanatory also of the recent views regarding nystagmus.

Macular supremacy of vision is an acquired and not a congenital condition. It is on this that binocular fixation depends, and also the education of the volitional co-ordinate



reflexes of conjugate deviation. Anything which will prevent the attainment of this supremacy will be, *quoad hoc*, a factor in the genesis of nystagmus. Among such factors we may class opacities of the media such as corneal opacity, persistent pupillary membrane, congenital cataract and vitreous effusion of blood, deficiencies in the tunics causing congenital amblyopia, coloboma of choroid and absence of pigment.

DR. SEQUEIRA discussed the causes of nystagmus, suggesting that in this case it was due more to excitement than to refractive errors.

DR. ETTLES in reply said that Nettleship (Royal Lond. Ophth. Hosp. Reports, 1887) mentioned corneal astigmatism after ophthalmia neonatorum as a possible cause of nystagmus. The child had worn the glasses not quite three months, and a longer time was necessary to entirely eliminate the faulty innervation. In cases of esotropia, correction of existing hyperopia did not immediately remove the deviation because the faulty innervation was habitual. So in this case it had to be unlearned and the true one learned.

## PAROXYSMAL HÆMOGLOBINURIA.

*Case shown by Dr. Fred. J. Smith.*

DR. FRED J. SMITH showed a case of paroxysmal hæmoglobinuria in a woman of 40. The case was associated with the phenomenon known as local syncope in the fingers; it presented the usual feature of attacks following exposure to cold, and preceded by sense of chilliness amounting at times almost to a rigor. The point of interest lay in the fact that the patient had been perfectly well until she came to live at East Ham which was really a malarious district, and Dr. Smith wondered whether the case had any relationship with the black water fever of Africa.

DR. CHAPLIN asked what treatment Dr. Smith proposed to adopt, mentioning a case in which large quantities of hot soup had proved to be a prophylactic.

DR. COTMAN remarked that the late Dr. Moxon had suffered from the same trouble and had cured himself by drinking half a gallon of cold water daily.

## LOCAL ASPHYXIA OF HEELS.

*Case shown by Mr. Openshaw.*

MR. OPENSHAW showed a case of patches of local asphyxia on the heels of a girl of 17 : her previous history showed that from the age of 9 to 13 she suffered from excessive perspiration of the feet, associated with bromidrosis, since 13 she always had had patches of discolouration more or less marked on the heels and toes, surrounded by a ring of hyperæmia and accompanied by dysæsthesia of the same region. She showed no other signs of Raynaud's disease.

SIR HUGH BEEVOR questioned the correctness of applying the term Raynaud's disease to the condition : he had watched the case with some interest and thought that the red margin round the blue patches and the locality of the patches on the heel were exceptional features.

DR. COTMAN accepted the view that the case was not one of Raynaud's disease at all, but that the condition was due to maceration of the feet in perspiration with prolonged standing, as occurred frequently in girls in shops. He had seen many similar cases cured by the simple means of frequent changes of stockings, cleanliness of the feet, and more rest.

DR. ETTLES supported Dr. Cotman's views, having seen many of his cases. He had also noticed, in addition to the state of the feet, a bul-  
lous inflammation of the tips of the fingers and palmar surface of the hands in anæmic girls. It probably was a neurotic dystrophy, although the hyperidrosis and the dependent position of the extremities might account for it.

## POST HERPETIC NEURALGIA.

*Two cases shown by Sir Hugh Beevor.*

SIR HUGH BEEVOR showed a male and female patient, aged 66 and 59 respectively. The man had suffered five years ago with herpes, in the cervical region from ramus of jaw to the second dorsal nerve, and now complained of itching and formication with severe neuralgic pains ; he looked very worn and old from the continuance of the suffering. The woman's illness dated back two years to an attack of cervical shingles reaching from the jaw to the spine of the scapula ; she complained of intense pain and

itching and sensations of heat and cold. Sir H. Beevor read a long list of remedies which had been tried in both cases but with little or no success. He then proceeded to discuss the distribution of herpes and the prognosis of neuralgia following it, stating that the latter varied inversely with the age of the patient. He asked Mr. Woods to try the effect of suggestion (the cases were subsequently shown at the meeting on January 22, 1896 q.v.).

THE PRESIDENT suggested the use of rather severe counter-irritation applied to some of the very tender points, and mentioned the good results he had seen from the procedure in several cases of submammary pain.

DR. COTMAN mentioned a case of very peculiar distribution of herpes that he had seen.

DR. FRED. J. SMITH mentioned Dr. Gower's opinion on the exceeding obstinacy of post-herpetic neuralgia in old people.

### FIBROID PHTHISIS.

*Case shown by Sir Hugh Beevor.*

SIR HUGH BEEVOR showed a boy of four years of age with the base of the right lung in the condition known as fibroid phthisis ; the condition supervened on an attack of pleurisy and broncho-pneumonia which occurred when the patient was nine months old.

DR. CHAPLIN remarked that the case was a beautiful and typical example of fibroid disease of the front of the right lung with dragging over of the heart ; compensatory emphysema of the left lung would account for the great resonance at the back of the chest.

### IMPERFECT PINNA.

*Case shown by Dr. Glover Lyon.*

DR. G. LYON showed a case of congenital imperfect development of the pinna of the right ear, which was about half the size of the other and showed an entire absence of lobule, with occlusion of the meatus. There was nerve deafness on both sides, more marked on the right.



## DISTENSION OF LEFT FRONTAL SINUS.

*Case shown by Dr. Ettles.*

DR. ETTLES showed a case of distention of the left frontal sinus, in a woman aged 54. The tumour was of two months' duration, painless, non-progressive, and non-fluctuating.

He thought it might be a quiet gumma of the periosteum or a periosteal sarcoma. The history excluded exostosis or dermoid. There was no history of syphilis, and potassio-mercuric iodide had been given without avail. He thought it probably due to distension by retained mucus.

The case presented a swelling at the inner angle of the left orbit.

MR. SYMONDS alluded to the difficulty of operating on such cases, but advocated opening them just above the brow for convenience of drainage and for passing a probe into the nose.

## HYPEREXOTROPIA.

*Case shown by Dr. Ettles.*

A young woman had a divergent squint in the right eye with a vertical deviation. Convergence was good and vision 6/9 in each eye, no diplopia though binocular fixation was absent. The treatment is to advance the right internal rectus and correct the vertical squint with a prism.

## DISEASE OF LEFT ANKLE JOINT.

*Case shown by Dr. Cotman.*

DR. COTMAN showed a case of disease and injury of the left ankle with the following history :—

*Personal history.*—E. J. W., æt. 37, married, fireman, received an injury to his left ankle on May 4th, 1895.

*Previous history.*—He has always been a strong man. About thirteen or fourteen years ago he had a penile sore, followed by an eruption on his trunk, and slight sore throat. He has had no tertiary symptoms. Early in 1895 he had an attack of influenza followed by pneumonia. No family history can be obtained.

*History of injury.*—He was at a fire on May 4th, and while at work in the basement of a building he fell owing to the roughness of the ground. He did not think that he had hurt himself, and climbed a ladder to an upper storey without pain or inconvenience. Shortly afterwards he went down again to fetch some lengths of scaling ladder. While carrying these up he noticed that his left ankle felt weak. It caused him no pain, but seemed to be swollen as his boot felt tight. On removal of the boot the ankle was seen to be enlarged. He walked about a quarter of a mile to obtain medical advice.

*Examination of the joint.*—The left ankle was swollen and there appeared to be some fluid in the joint. There was considerable cedema of soft tissues. Movements at the ankle-joint were fairly free and caused him no pain. The following day swelling and ecchymosis extended half way up the leg, but there was no inflammatory redness or pain. The treatment consisted in rest, and slight pressure with a bandage. The swelling gradually decreased, and by the 27th May he was allowed to return to duty. The ankle felt perfectly strong, the movements were free, and he could walk without pain or inconvenience. The left ankle, however, still seemed slightly larger than the right. In November, 1895, he returned on account of a gradual increase in size of the left ankle. During the six months which had elapsed since he was last under observation he has been able to follow his occupation as fireman without inconvenience of any kind, and has sometimes had to run one or two miles with the fire-escape. He would not know that there was anything wrong with his ankle if he did not see it. It feels perfectly strong. The left ankle has undoubtedly increased

very markedly in size. The lower end of the tibia and both malleoli, especially the tibial one, are enlarged, and the tissues



*Illustrations showing the ankle, A grown front, B grown behind.*

over the joint are thickened. This is specially apparent beneath the malleoli, where the soft tissues form thick folds, that beneath the inner malleolus being most marked. There is no œdema and no fluid can be detected in the ankle joint. Movements are quite free and painless. The pupils are small and the right one is very slightly larger than the left. They respond so slightly to light that it is only on the most careful examination that any alteration in size can be determined. They vary with alterations in accommodation, but even in this are rather sluggish. He admits that during the last twelve months or so he has had ill-defined pains in his back and limbs, but no typical "lightening" pains have been present. No other evidence of locomotor ataxy can be obtained. No objective signs of syphilis past or present can be found.

MR. TARGETT thought that the case was probably one of Charcot's disease of the ankle excited by the accident, which was quite possibly a fracture of the bones. The absence of pain was the chief point that made this explanation probable.



THE PRESIDENT mentioned two somewhat similar cases which had come under his notice : one occurred in the days before tabetic arthropathy was recognised and the foot was amputated : the other had subsided under the prolonged use of iodide of potassium.

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NOVEMBER 27th.

VAGINISMUS AND ALLIED AFFECTIONS.

*Abstract of Paper read by Dr. Herman.*

DR. HERMAN said that the subject of his paper was those diseases which had as their chief symptom "dyspareunia," that is, pain and difficulty in sexual intercourse. He divided these into three classes, viz. : (1) simple smallness of the vaginal orifice. In this there was no visible sign of disease, gentle examination did not cause pain, the patient was quite well till marriage, and the trouble dated from marriage. The treatment was to enlarge the vaginal orifice. This might be done (*a*) by gradual dilatation, (*b*) rapid dilatation, (*c*) by incision. The last method was the best. (2) Disease of the vulva such as to make it tender. Most of these caused the patient to complain of something else besides dyspareunia. The one of which dyspareunia was the first and chief symptom was that to which the late Professor Breisky of Vienna had given the name of "Kraurosis Vulvæ." It was characterised by progressive contraction and tenderness of the vaginal orifice. Kraurosis meant shrinking.

Mr. Lawson Tait had described a condition having similar features, but, in addition, patches of purple or brown discoloration. Mr. Tait held that this was an early stage of the condition described by Breisky, but German writers denied this. In some of the cases of kraurosis described by German writers, red or purple discoloration was present. He (Dr. Herman) had seen purple tender spots on the vulva get well without leaving shrinking or tenderness behind : he had also seen purple spots, like those in the condition described by Tait, but which were not tender. He

therefore thought Tait was right in thinking that his cases were examples of the disease described by Breisky, but that the colouration was not an essential part of the disease. Kraurosis came on towards the climacteric age. Sometimes it followed oophorectomy. It was often associated with vaginitis, and with itching and burning of the vulva without contact. The best treatment was the use of sedative vaginal injections, such as lead or boric acid ; and dusting the vulva with sedative powder such as boric acid or dermatol. By such treatment the patient could usually be placed in comfort if not married. If such treatment failed, or if the patient were married, the only treatment was to excise the tender mucous surface. He had done this in one case with success. (3) Vaginismus. This was a nervous disease, attended with hyperæsthesia of the vulva and spasmodic contraction of the levator ani and other muscles, often associated with dysmenorrhœa and hyperæsthesia of the rectum. This disease was generally discovered at marriage, but might suddenly appear after years of healthy married life. Sometimes it was cured by curing dysmenorrhœa. Otherwise, vaginismus was incurable, even by childbirth, though in the course of years it got somewhat less. It was sometimes difficult to distinguish genuine vaginismus from mere smallness of the vaginal orifice in a sensitive patient. In a doubtful case the best treatment was to give the patient the benefit of the doubt and enlarge the vaginal orifice by operation. Dr. Herman exhibited a drawing of a case of kraurosis vulvæ.

MR. G. J. B. STEVENS thought that the subject of Dr. Herman's paper was one which did not often come before the general practitioner. He could only call to mind some three or four cases of vaginal trouble in which irritation was the chief symptom, and he had usually found a caruncle as the exciting cause. He spoke of one case, however, which he had seen, in which caruncle was not the cause of the symptoms ; the condition found was one of small congested ulcers which were probably herpetic vesicles that had ruptured. Congestion of the mucous membrane he thought might deceive observers.

DR. FRED J. SMITH thought that kraurosis vulvæ was probably a trophoneurosis allied to morphæa and leucodermia.

DR. COTMAN said he had seen a few cases of vaginismus, but he thought that most usually it was the size of the male organ that was at fault.

THE PRESIDENT, speaking of kraurosis vulvæ, said that he thought its nearest pathological allies were probably chronic superficial glossitis and that peculiar hardening and contraction of the prepuce met with occasionally in men ; in fact, he was inclined to believe that there was a pathological identity between the latter affection and kraurosis vulvæ.

DR. SHADWELL said he had had under his care a genuine case of vaginismus which nothing had cured, and thought that probably he had recently come across another case, but the husband only had been to him as yet complaining that coition had never been successfully accomplished.

DR. HERMAN, in reply, said he had not seen a case of herpes of the vagina with lesions on both sides. He agreed with Dr. Smith and Mr. Symonds in thinking that kraurosis vulvæ was really a trophoneurosis and probably identical, as German authorities were already teaching, with the white patches on the tongue and the preputial condition mentioned.

## PHYSIOLOGICAL REST FOR THE LUNG IN PHTHISIS.

*Paper read by Dr. Arnold Chaplin.*

This short paper, which I have the honour of reading before the Hunterian Society to-night, was not written so much with the view of giving actual results of treating phthisis by physiological rest to the lung ; but rather to call attention to the subject, and if possible elicit opinion thereon. It has always appeared to me a strange thing, that while medical and surgical practice has laid down the axiom, that one of the cardinal principles of treatment of disease is rest, physiological rest to the part affected, yet, in the case of phthisis we make an exception to that almost universal rule. From a logical stand-point one would say that what is true of the whole is also true of a part. But what do we do in a case of phthisis ? We encourage our patients to take exercise, to do, in fact, everything which increases expiration and inspiration. We take little heed of the fact that because the lung is diseased, there is a necessity for rest from the normal work of the organ.



Indeed, it is not too much to say that of late in our mad search for a specific for the cure of phthisis we have thrown to the winds all ideas of treating phthisis by means of rest to the part affected. I would not for a moment detract from the great value of the work done during the last few years in the treatment of phthisis. But I am convinced that the all-absorbing question of a cure for phthisis is making us forgetful of the value of attention to minor details in the treatment of the disease. I shall attempt to show in this paper that physiological rest in the lung, is essential in the treatment of phthisis, and that we have very strong reasons for taking up this position, from what may be observed in certain complications attendant upon phthisis.

In support of my contention that physiological rest to the lung is necessary in the treatment of phthisis, I will describe what happens to the phthisical lung, when the pleural cavity of that side becomes the seat of an effusion, whether of serum or pus. The natural result, of course, of this complication is that the lung becomes more or less collapsed, and much of the blood driven out of it. In other words it becomes quiescent and incapable of performing its functions. Now, sir, I have observed many of these cases of phthisis complicated with effusion, and my first idea was that it was a very grave complication. But subsequent experience has taught me to look upon the onset of effusion as a most happy result. For, in the majority of instances, I have noticed that the phthisis instead of becoming worse, has quieted down and has, while the effusion was present, given rise to but slight trouble. But when the effusion has been treated by means of aspiration, in a very short time the phthisis has, as it were, lighted up again, and increased in virulence. For some time now I have interpreted this improvement in the phthisis as being due to the fact that the effusion has compelled the affected lung to strike work, in other words has entailed physiological rest upon the lung. To make these phenomena plainer I would venture to trouble the Society with a brief narration of a case under my care at the Victoria Park Chest Hospital some time ago. A man, aged

28, was admitted into the hospital with early phthisis of the left apex. His constitutional symptoms all pointed to the fact that the disease was active. He was sweating profusely, his temperature was hectic, his powers of digestion small, and everything seemed to point to a short but acute attack of phthisis. He was in the hospital for six weeks, and during that time made but little improvement, in fact, he seemed to be losing ground, and at the end of his time left with no improvement. Nothing was heard of him for some time, until about three months afterwards when he put in an appearance at the out-patient department, with a large pleural effusion on the left side. In spite of this grave complication, however, the patient was in a better condition than formerly. He stated that he had been treated for the pleurisy for about six weeks. There was no evidence of hectic, he did not seem to be wasting and the cough was of trifling character. On taking him into the ward and submitting him to a thorough examination, the left pleural cavity was found to be two-thirds full of fluid, and careful listening at the left apex could detect little or no evidence of phthisis. In fact the only thing he complained of was dyspnœa. Want of experience led me to order aspiration. Accordingly this was done, and in a little while, the pleural effusion was dissipated. But with the return to normal condition in the pleura, the phthisis of the left lung which had during this time been lying dormant, lighted up, and in a short time, the man was in as bad a condition as formerly. He again went out but soon returned with the phthisis quiescent, and this time an effusion of pus in the pleura. Profiting by former experience we decided to let the pus alone, and, for a long time, the man went on with but little inconvenience, his phthisis making no progress and the empyema quite chronic. A year after this the pus was evacuated and eventually the man came to be in the serious condition of having a discharging abscess in the pleura, and advancing phthisis of the apex of the left lung.

Now I would interpret the phenomena of the phthisis quieting down with the onset of pleural effusion as being

due to the fact that the lung with such a condition attendant was unable to do its work, was unable to move, and was, to a certain extent, deprived of its blood, and I cannot help thinking that we should do well to take a lesson from the way in which nature gives rest to the lung, when treating phthisis. Instead of encouraging our cases of phthisis to take violent exercise, travel, and in other ways exert themselves, I believe we should, in many cases, be doing more service by keeping them quiet, and free from anything that places extra strain upon the lung.

The question naturally arises, is there anything we can do, besides giving general directions as to exercise and mode of life, which will result in giving physiological rest to the lung? I think there is. Last August, in course of conversation with Dr. Stuart Tidy, who practises at one of the Italian health resorts, I was informed by him that of late he had been obtaining some success in the treatment of phthisis by more or less fixing the chest with strapping. This, of course, is not a new treatment. But after hearing of this method from Dr. Tidy I determined to try it and see what good came of it. Accordingly, for the last three or four months I have been treating cases of phthisis by strapping the affected side with wide strips of ordinary plaster. I have been in the habit of applying the strapping so as to fix the whole lung more or less.

While I am aware that strapping does not prevent in any considerable degree the movement of the lung, yet I feel convinced that if even a small amount of movement in the lung can be saved something is gained, and I cannot help thinking the method is worth a trial.

The patients, most of them, speak of the treatment as giving a feeling of comfort and tending in a slight degree to lessen pain and alleviate cough. But to say more than this I fear my experience will not allow me.

MR. SYMONDS remarked that as far back as 1882 Dr. Mahomed had asked him to produce an artificial pneumothorax for the purpose of giving rest to a phthisical lung, but they had not actually gone so far as to perform the operation.



MR. OPENSHAW said that the late Dr. Sutton would not allow aspiration to be performed on a fluid effusion occurring outside a phthisical lung until dyspnoea became extreme. On one such occasion he had drawn off 210 ounces of fluid in twelve hours; waiting for dyspnoea Dr. Sutton had frequently left fluid in the chest for months. He thought that empyema frequently resulted from aspiration when there was tubercle in the chest.

DR. HUMPHREYS remarked that there existed advice now in contrary directions, some advocating expansion with free exercise of a lung in the early stages of phthisis, while others advised complete rest to the same lung. He himself had seen two cases which pointed also in opposite directions, one shewing the value of rest in bed for some months and the other the value of active expansion of a lung affected with tubercle. He quoted the case of a cripple, who could not get about and whose lungs were both badly attacked by tubercular mischief, one pleura filled with fluid; this he succeeded in getting rid of, but the patient rapidly succumbed afterwards.

SIR HUGH BEEVOR thought that many important questions were raised by Dr. Chaplin's paper. The physiology of the involved lung included movement, if movement ceased pathology stepped in; he had not yet tried the effect of mechanical restraint of the chest in phthisis. He agreed with Dr. Chaplin in thinking that it was wise not to remove a pleural effusion in phthisis except for very urgent reasons, though at the same time he thought there might be other reasons than want of movement, which explained the lack of advance in the processes of the disease; it was true that want of movement was one of the earliest signs in a lung attacked by tubercle, this immobility, however, he would not be inclined to increase by artificial means. High altitudes, he thought, did not mean diminution of movement in the lung, and yet they were unquestionably useful in the early stages of consumption.

DR. COTMAN said that many difficulties occurred in private practice with reference to aspiration. He asked, must an effusion be left because one suspected that phthisis was at the bottom of it? The teaching he had received was to tap early and tap often if necessary, and he had met with good results from this practice.

MR. STEVENS said he would try to ascertain whether phthisis were present or not before aspirating a pleural effusion.

DR. JAMES H. SEQUEIRA asked what was the effect on the other lung of leaving an effusion in one pleura.

DR. FRED J. SMITH said that the late Sir Andrew Clark pursued the plan advocated by Dr. Chaplin, and would on no account allow aspiration of a pleural effusion in cases of consumption. Personally, he thought that each case should be judged on its own merits, and aspiration performed or not on the balance of indications. Theoretically, he was of opinion that removal of fluid was advisable, as the exercise of a tubercular lung was not to be compared to the exercise of an inflamed muscle.

Pure air seemed to be antagonistic to the bacillus and should therefore be brought in contact with it to kill it.

DR. CHAPLIN, in reply, said that pneumothorax was hard to produce artificially for long. Notwithstanding what had been said, he still thought that the chest should not be emptied if tubercle were present, but simple effusions might be more lightly operated upon. We have two lungs, he said, and one could do the work while the other rested. He would ask Sir Hugh Beevor why he was afraid to help nature, who diminished movement when tubercle had settled on the lung. Even if aspiration were required he would never completely empty a pleura, but would leave a little fluid. He thought very divergent views were held on the principles he had advocated to-night, and though he could not lay down the law to others he had at any rate made up his mind to act on these principles himself.

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#### DECEMBER 11th, 1895.—Pathological Evening.

##### TUBERCLE OF CHOROID.

*Specimen shown by Dr. Fred J. Smith.*

DR. FRED. J. SMITH showed the posterior halves of the globes of the eyes exhibiting several well marked caseous tubercular foci. The specimens were removed from a little child of four years of age who died of Tubercular Meningitis; the case was somewhat out of the usual run, but diagnosis was rendered certain by the discovery of the choroidal affection during life. The specimen is in the London Hospital Museum.

##### PERFORATING ULCER OF STOMACH.

*Specimen shown by Dr. J. S. Cotman.*

DR. COTMAN said the specimen was taken from a man of 48, whom he had attended on and off for many years with mild dyspeptic attacks. On the final occasion he came to his office as usual, but sent for Dr. Cotman, saying he had tripped over an obstacle and now had severe abdominal pain; lulled into a false sense of security by his previous attacks, Dr. Cotman said he did not recognise the gravity of

the condition, and gave the patient a simple opiate under which the pain diminished, and he was taken home but died during the night.

The ulcer was situated at the pyloric end of the stomach, and on the posterior surface near the greater curvature. Dr. Cotman remarked that he was not likely to overlook another case of the kind, but would be glad to hear from those fellows who had greater opportunities of treating such cases by operation what was the best procedure to pursue if he unfortunately met with a similar case, and asked would they be prepared to operate if the case were sent in promptly.

MR. SYMONDS asked questions as to the condition of the pulse at the onset of the pain ; life, he said, could not be long in such an accident if operation were not undertaken, especially if, as usually happened, diffuse suppurative peritonitis supervened : age, he said, influenced diagnosis to some extent, perforation being commoner between 40 and 50, or in young girls. He mentioned a case which had occurred to him in which the pulse was only 60, it died on the sixth day from pneumonia, after recovering practically from the operation. As regards the difficulties in diagnosis he sympathised with Dr. Cotman and said they were almost insuperable in some cases ; he illustrated this by the history of a patient who was seized with sudden severe abdominal pain, thought to be perforation due to an ulcer, but a little delay proved the case to be one of pneumonia ; another case was that of a girl who had had two attacks of hæmatemesis and was then seized with the symptoms of perforation, he opened the abdomen, no perforation was found, but the patient got quite well : on the other hand he had seen a case of perforation which did not seem to be severe and operation was not undertaken, but severe tympanites occurred and death took place. He asked what was the best method of dealing with a perforation on the posterior wall.

DR. FRED J. SMITH said that the diagnosis of such an accident must mainly rest on the suddenness of the onset of the pain, and also the severity of the associated shock ; any case in which sudden abdominal pain occurred should be watched persistently and continuously for some hours and if the symptoms got steadily worse an exploratory incision should be made as it could do no harm. He mentioned several cases he had seen in which life might have been saved had his advice been followed.

MR. OPENSHAW mentioned a case in a young lady who stumbled when stepping down from a dog cart, was seized with intense abdominal pain, and died in twelve hours ; a post mortem showed a perforating ulcer. He also detailed the case of a boy shot through the stomach, who died after the holes had been sewn up.



DR. COTMAN in reply said he was glad to find himself erring in diagnosis in such good company ; he said that text books described ulcers as being commoner on the posterior surface, but perforations seemed commoner on the anterior wall of the stomach.

## RHEUMATOID ARTHRITIS OF SHOULDER.

*Specimen shown by Dr. Jas. H. Sequeira.*

DR. SEQUEIRA said : The specimen shows the characteristic appearances of rheumatoid arthritis affecting a left shoulder joint. It was obtained from the body of a man, aged 60. The interest of the specimen lies in the complete absorption of the intra-capsular part of the long tendon of the biceps. The extra-capsular portion is of extreme tenuity and is attached above to the transverse humeral ligament, a portion of the capsule joining the tuberosities, and bridging over the upper part of the bicipital groove. The muscular belly of the long head is much wasted, and is partly replaced by fat. The short head is of normal size. The opposite shoulder was slightly affected, but the other joints were but little involved.

The condition is a well-recognised one, but is somewhat uncommon. The earlier stages of the process are well shown in two specimens in the London Hospital Museum. In one the tendon is the seat of ulceration and in the second, the tendon is in two parts, and is described in the catalogue as appearing broken. I have seen in the dissecting room an instance of atrophy of the muscular belly of the long head of the biceps, where there was no arthritic disease, and the condition was, doubtless, due to a localised lesion affecting the anterior horn of the cord, or of the nerve to the long-head.

I presume that we cannot consider the specimen I show then as an evidence of a muscular and articular dystrophy, as might be urged by supporters of the nervous origin of osteo-arthritis. The destruction of the tendon by the inflammatory changes within the capsule, and the consequent loss of function are, I think, sufficient to account for the wasting of the muscle.

DR. CAMPBELL M'DONNELL thought the case interesting as opening up the etiology of rheumatoid arthritis, which he believed was distinctly a neurosis, he always found wasting of muscles round an affected joint greater, he thought, than mere disuse would account for. The deformity and distortion of a joint induced by the disease varied very much in different cases. Dr. Ferrier had shown that long continued pain might reflexly induce atrophy. Rheumatism and rheumatoid arthritis were only related, if at all, through the nervous system.

DR. GLOVER LYON thought we knew very little of the essential nature of rheumatoid arthritis ; he mentioned a case of rapid atrophy of muscle in an athletic man, which had been associated with acute pain in a joint, and he thought disuse was sufficient in some cases to account for the atrophy ; but on the other hand the most extreme case of joint fixation he had ever seen was in an old lady of 80, and in her the muscles acted strongly and well as far as the bony impediments would allow them.

DR. SEQUEIRA, in reply, said the atrophy of the biceps he attributed to absorption of the tendon.

### SARCOMATA.

*Specimens shown by Mr. Openshaw.*

Mr. OPENSHAW showed :—

1. A specimen of sarcoma of the ovary which had grown rapidly during pregnancy, its presence was not noticed till ten days after parturition, at which date she was admitted to hospital, but was too weak to bear operation till a month later. The tumour weighed 7 lb. 7 oz., and was proved by microscopical examination to be a small round celled sarcoma ; at the operation its pedicle was found twisted and gangrenous, and numerous soft adhesions existed between it and the intestines, which gave no difficulty. Three months later a recurrence took place and she was re-admitted with ascites and pleural effusion, which were removed with relief to the patient, but she died in six days.

2. A sarcoma of the kidney which had been noticed growing for five months in the abdomen of a man of 25. At the operation he had found the two kidneys in contact, though not in actual continuity.

3. A specimen of sarcoma of the thigh, taken by operation from a little girl of 12. The tumour was six inches

long, endosteal in position, and showed myeloid structure. It had been noticed growing for nine months, and was said to have followed a blow. Amputation at the hip was performed with complete success.

THE PRESIDENT asked, with regard to No. 1 specimen, whether there was any growth in the pleura to account for the effusion. With regard to the accident of twisting of the pedicle of an ovarian tumour, he mentioned a case in which actual necrosis had taken place in the pedicle, but the patient recovered after operation, and a second case diagnosed as twisted pedicle, but operation revealed a suppurating ovarian cyst. No. 2 specimen, he thought, might be an adenoma of the suprarenal, and gave an outline of an extraordinary case he had seen in which a large abdominal tumour had been discovered by accident, and had been present certainly for six years, and possibly twelve, without causing serious trouble. He believed it to be an adenoma of the suprarenal, but no post mortem had been obtained when the patient died of some other disease. In No. 3, he asked whether it might not have been possible to remove the growth locally without performing such a formidable operation as amputation at the hip.

In reply, Mr. OPENSHAW said there was no growth in the pleura in Case 1 ; in Case 3 he had been unable to do anything less than the radical operation of removing the whole leg.

**JANUARY 8th, 1896.**

## PHARYNGEAL AFFECTIONS AND THEIR RELATION TO DIPHTHERIA.

*Paper read by Dr J. H. Sequeira.*

In the paper which I have the honour of reading before the Society to-night, I do not pretend to set forth any new or original work, but an aspect of a familiar subject to which I have devoted some little attention and which I feel is not uninteresting. For some years now attention has been focussed upon bacterial infection, and scarcely a month passes without some addition being made to our stock of information about micro-parasites. This evening, however, I do not propose to occupy your time with a discussion of the merits or demerits of any particular organism. I want to take it for granted that diphtheria is a bacterial disease and that it is due to a specific parasite, the Klebs-Loeffler bacillus.



From that point I will start by saying that this organism may enter the body by one of three channels. It may be directly inoculated, gaining admission through an aperture in the skin or mucous membrane. Secondly, it may enter the body by means of the alimentary canal ; and, lastly, it may be admitted by the respiratory tract.

With your permission, I will devote what I have to say to the consideration of the entrance of the specific virus by the air passages. The air enters the respiratory apparatus by the nose and by the mouth. An important question now arises—"What is the fate of micro-organisms in the nose?" It was for a long time considered that the nose with its irregular cavities formed an excellent locality for the cultivation of bacteria. It was pointed out that the various recesses of the nasal cavities, kept at a suitable temperature by the blood circulating in the elaborate vascular network lining these chambers, furnished all that was necessary for bacterial life.

The recent important researches of Dr. St. Clair Thompson and Dr. Hewlett, embodied in papers read at the Royal Medico Chirurgical Society and at the Annual Meeting of the British Medical Association, show that the nose may, as a matter of fact, be considered a sterilising chamber. By a careful series of experiments these observers have shown that whereas the vestibules of the nares were crowded with micro-organisms, the vibrissæ in fact teeming with them, the interior of the normal nasal cavities was practically free from bacteria.

A further series of experiments carried out on animals showed that the deeper parts of the nose were really sterile. This is an important fact, and one of extreme practical value. One point, at once recognised, is that nasal breathing (the nose itself being healthy) practically prevents aerial infection by micro-organisms. It will follow, of course, as a corollary of this observation, that obstruction of the nasal passages by adenoid vegetations in the nasopharynx and by hypertrophied tonsils must necessarily largely increase the risk of infection by the obligation to oral respiration.

These observations are also worthy of consideration with regard to nasal diphtheria. Primary nasal diphtheria is admittedly a rare manifestation of the disease. It must, it now appears, be a process starting either in the vestibule, or must extend forward from the nasopharynx, and there is no doubt that the latter is the usual way in which it develops.

I will now offer some considerations about the mouth. It has been shown repeatedly that the oral cavity is a most prolific hunting ground for various micro-organisms, and I will not weary you by a catalogue of the names of the various parasites that have been found there. It will suffice to say that the Klebs-Loeffler bacillus is one of them, and I may mention that from the buccal and pharyngeal mucus of perfectly healthy attendants upon diphtheria patients, cultivations of the bacillus have been made. It is, however, extremely rare to find diphtheria starting in the buccal mucous membrane. I remember having seen one such case, and I have no doubt that there must have been some antecedent local cause for such a condition. It could only have occurred, I imagine, if the lining membrane had been damaged. Such, indeed, I look upon as an inoculation through a loss of epithelium.

On the tonsil, however, we find that the micro-organism commonly finds a suitable nidus. But it appears that all tonsils are not equally susceptible. For, I have known medical men and nurses, in daily contact with diphtheria cases for months and years, without contracting the disease. The question naturally arises "What conditions of the tonsil favour the attack of the bacilli?"

I will now venture to trouble you with certain details of the structure of the tonsil. It consists of masses of lymphoid tissue, covered with stratified epithelium, and this epithelium dips down in from 15 to 20 places. The depressions so formed are called the crypts or lacunae. These lacunae are thickly furnished with follicles, while between them lie quantities of small lymph glands. In the specimens which I have examined the epithelium at the bottom of the crypts has fewer layers than elsewhere. It

was first pointed out by Stoehr that the lymphoid cells of the tonsil have the power of migrating through the epithelium, and they are thus discharged on the surface, where they swell up and mix with the saliva.

It is held by some that the two tonsils, standing like sentinels on each side of the pharynx, with the pharyngeal tonsil, are in reality special organs for the destruction of micro-organisms. These masses of lymphoid tissue are considered as traps in which the parasites are caught and destroyed by phagocytes, which are, as it were, secreted by them.

On the other hand, it may be urged that if the lymphoid cells have the power of migrating to the surface, parasites may get a point of attack through the breaks in continuity.

One point is certain, that the crypts form receptacles for the lodgment of bacteria, and a second, is that the tonsil is especially liable to catarrh, and in the catarrhal process epithelium is constantly shed and constantly replaced by younger cells, probably less adapted for resistance, just as we find recurring catarrh of the bronchi renders the tubes more prone to further attacks of inflammation.

But there is a certain class of person, whom, for want of a better term, one may call "throaty"; this class is especially subject to pharyngeal catarrh. The tonsils are hypertrophied, the lymphoid tissue of the nasopharynx is also hypertrophied, forming the so-called adenoid vegetations, and I feel convinced that these conditions vastly favour bacterial infection of the diphtheritic type.

First, we have the necessity of oral respiration in bad cases, and the absence of the sterilising effect of the nasal passages.

Secondly, we have an enormous increase in surface, that is to say, an increased area of attack.

Thirdly, we have an alteration in the surface. In some cases the crypts are enormously increased in depth. In these cavities the infective microbes may be dormant, until a suitable occasion for development arises. In most cases the epithelium undergoes change, and just as a



chronic catarrhal condition of the lungs predisposes to phthisis, so I believe the chronic catarrh which is present in these cases of lymphoid hypertrophy predisposes to diphtherial infection. I will not go so far as to say that I believe a healthy tonsil is incapable of this specific infection, but I have a strong conviction that such infection must be comparatively rare.

Now, in considering the clinical side, I think my contention is borne out by the following observations. I will first quote the remarks of Dr. Donkin. In his work on "Diseases of Childhood," he says, "A morbid condition of the nasopharynx is a most important factor in the morbid action of the organic cause." And, again, Dr. Osler, whose reputation as a clinical observer is contested by none, writes thus "Children with enlarged tonsils are . . . more liable to diphtheria, and in them the anginal features of scarlatina are always more serious." Further, Ball, in his work on diseases of the nose and pharynx, in discussing diphtheria, remarks, "In order to develop it would seem that the virus should reach a surface which is eroded or more or less inflamed." And "it seems probable also that the bacilli may enter a healthy throat and there maintain their vitality without ill result for a certain period, until the outbreak of an inflammatory attack of some sort, or slight traumatism favours the development of the disease." This would seem to account for variations in the time of incubation.

It is a well-recognised fact in this connection, that scarlatinal convalescents are particularly liable to diphtheria. The inference here is natural that the scarlatinal process has so damaged the tonsil that it falls an easy prey to the diphtheria contagium.

We know also that adenoids usually commence in the third year of life, in many cases as early as the first year, and in a few are present at birth. They are rarer after puberty, and only occasionally persist in adult life.

Hypertrophied tonsils are most common between the ages of 2 and 6 years, and tend to decrease after 20, The hyper-

trophy has usually disappeared after 30, and is rare later. If my contention is correct we ought to find that the incidence of diphtheria varies in the same way with age. This was amply borne out by an examination of the published statistics of the Metropolitan Asylum's Board Hospitals. To avoid any error I took the cases occurring during five years, 1890—1894 inclusive, and I found that of 10,777 cases of diphtheria, no less than 3,281 cases were between the ages of 2 and 5, and 3,461 between the ages of 5 and 10. That is to say, 65 per cent. of all cases were between the ages of 2 and 10 years. And between the ages of 2 and 15, that is roughly, up to puberty, a total of 7,976 cases, or nearly 80 per cent. of the patients. After 30, on the other hand, when we know that these affections of the pharyngeal lymphoid structures are much rarer, there were only 298 cases, or under 3 per cent.

Another point, but one upon which I do not lay much stress, as we know so little of the life history of these parasites, is that diphtheria is more prevalent in damp weather, a time when pharyngeal affections are more common. This is strikingly borne out by an examination of the weather returns in this connection.

A few instances under my own observation are worthy of notice. In one case, a medical man had been in daily attendance upon patients in diphtheria wards for eleven months, with complete immunity. He had an attack of simple tonsillitis from which an apparently complete recovery was made. Within a week of his return to duty in the wards, he developed a definite attack of diphtheria. There was no possibility of doubt, for the throat was examined daily by the patient himself and by a senior colleague of vast experience. In another, a nurse, who had hypertrophied tonsils, a simple inflammation was followed by diphtheritic infection upon her return to work in the wards.

Of a series of 40 cases of diphtheria, which I examined in succession, I found evidence of chronic tonsillar hypertrophy in no less than 29. That is in 72·5 per cent. I must

acknowledge here the kindness of Dr. Gayton of the Hampstead Fever Hospital for the opportunity of seeing the majority of these. One point I must note, and that is, that it is a very difficult matter to be quite certain whether the hypertrophy preceded or was due to the diphtheritic inflammation, when examining an acute case.

I have, however, frequently felt adenoid growths in the nasopharynx of children suffering from diphtheritic paralysis, an observation rendered easy by the anæsthesia of the palate. But of these I have not examined a sufficient number to make a positive statement as to their relative frequency. I remember also, that a boy at the North Eastern Hospital for Children, who was admitted with laryngeal diphtheria, necessitating tracheotomy, was subsequently found to have a large mass of adenoids in the nasopharynx. These were removed before his discharge from the hospital.

In conclusion, I would summarise my observations thus :—

(1) Tonsillar hypertrophy and post-nasal adenoids are found chiefly in children from the age of two years up to puberty. Eighty per cent. of the cases of diphtheria is found between those ages.

(2) These pharyngeal affections are rare after 30. Only 3 per cent. of the cases of diphtheria occur at this period of life.

(3) Of a series of 40 cases of diphtheria, 72·5 per cent. presented evidence of tonsillar hypertrophy.

(4) Diphtheria is a common sequela of scarlatina, which severely affects the tonsils.

(5) Mouth breathing dependent upon nasopharyngeal obstruction largely increases the risk of infection.

(6) The air-blast from the lungs, which must be limited in pharyngeal obstruction, tends to diminish the expulsion of disease-germs, which therefore accumulate, especially in the cavities which exist on these chronic lymphoid excrescences.

Finally, I think it is safe to urge that, in addition to the recognised reasons for the treatment of these pharyngeal



affections, that we can assure ourselves that we are eliminating a source, the importance of which I have perhaps over-rated, but still a source of infection.

In conclusion, I trust that the imperfections of this paper, with its, perhaps, somewhat hasty conclusions, will be pardoned by the Society.

DR. FRED J. SMITH thought that enlarged tonsils and adenoids did not account for the whole increase in the vulnerability to diphtheria, but that it was the vital depression in these sentinels that was the chief factor, as well as some peculiarity of constitution which could not be further defined. In examining orphans for the London Orphan Asylum he found enlarged tonsils very frequently.

DR. HINGSTON FOX agreed with Dr. Smith's views, and thought that the constitutional peculiarity was possibly, if not probably, to be attributed to a family trait or hereditary tendency to become the prey of specific bacillary diseases. He saw whole families escape, while others suffered in nearly every individual. The bacilli might, however, lodge in tonsillar crypts and thus find secure resting places; this was an important consideration. He asked if the specific bacillus was to be accepted as the sole real test of true diphtheria.

DR. A. DAVIES quoted his experience at St. Bartholomew's Hospital, showing the great frequency with which diphtheria and scarlet fever were associated, and believed that the scarlet fever, by its attack on the tonsils, predisposed to the onset of diphtheria in the same position, and he thought the sequence a very important one.

MR. PERCY WARNER described a case in which a mother who nursed her child with diphtheria, acquired herself a simple follicular tonsillitis. The child had bacilli in its throat, tested by cultivation, for six weeks after all naked eye changes had disappeared. He isolated the child until the throat was germ-free.

DR. GOODALL was not at all convinced (judging by his great experience at the Fever Hospital) that throat disease did predispose to diphtheria. The great difficulty lay in getting satisfactory evidence of enlargement of the tonsils or chronic throat trouble previous to the attack of diphtheria. He thought that any constitutional disease or condition which lowered the resisting power of the patient would be sufficient to allow of infection, and it was possible that chronic pharyngeal conditions were of this nature, but proof was wanting. He mentioned the case of a medical man at a fever hospital who escaped infection for a long time until he was exposed to it when very much run down with overwork, and he then took the disease. He suspected that adenoids and chronic pharyngeal thickenings were frequently enough the result and not the cause of diphtheria. Did those, he asked, known to have adenoids get diphtheria out of proportion to those who had not got them? He recognised that diphtheria was a common sequel to scarlet fever, but there was no regularity in the sequence; sporadic outbursts of it un-

doubtedly occurred, but they were too irregular to allow him to be convinced of the relationship of strict cause and effect. For six months at a time in the hospital he had had no such sequela, and then suddenly a large number of cases occurred. He quoted the case of a child who, when convalescent from diphtheria (the child developed diphtheritic paralysis) ran about amongst the scarlet fever patients, and yet no outbreak of diphtheria took place. To sum up, while not contradicting Dr. Sequeira's views, he thought that at any rate more facts were required before they could be accepted as true.

THE PRESIDENT said he had had a large experience of children with adenoids, and his impression was that a previous history of diphtheria was very common amongst them. He had lost two patients from diphtheria following the operation for removal of adenoids.

DR. SEQUEIRA, in reply, said he thought Dr. Goodall's figures were not really opposed to the views that he advocated. He agreed with Dr. Smith as to the extreme frequency of enlarged tonsils in young people.

## LOCAL ARTHRITIS.

*Paper read by Dr. Fortescue Fox.*

By the word arthritis I would signify an inflammation of the joint accompanied by more or less degeneration or destruction of its tissues. Specific forms of arthritis, such as those resulting from pyæmia, gonorrhæa, tuberculosis, etc., may best be designated by the adjectives *purulent*, *septic*, *tuberculous*, etc.; whilst the term *simple arthritis* applies to cases for which no specific cause is known or can be assumed.

In a former communication\* I described, in three clinical groups, a disease marked by great constitutional depression and multiple arthritis. This, in contra-distinction to other forms of arthritis, is marked by the successive invasion and degeneration of many joints—a general disease, arising in predisposed subjects, according to the most probable hypothesis, from an affection of the nervous centres, progressive and possibly infective, but capable of arrest at any point.

The present paper has for its object to describe what in the writer's opinion is a purely local disease, an arthritis of

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\* See *Lancet*, 1895, Vol. II., p. 79

one joint, or at most of two or a few contiguous or related joints. Joint affections of this kind have hitherto been considered as varieties of rheumatoid or osteo-arthritis, on the ground that the joint lesion is presumably similar. There are, however, indications of difference even in the morbid anatomy, and on all other points true local arthritis is to be clearly distinguished from the constitutional malady, being separate in etiology, clinical characters, prognosis, and treatment. The occurrence of intermediate cases, in which local disease appears to have become generalised, should not obscure the difference between two separate things. This great distinction takes its root in the causation of disease, and is nowhere better observed than in affections of the joints. The causes of such affections are, in fact, *general* and *local*; and the etiology of joint affections furnishes us with the best guide in classification, as well as indicates the two branches of treatment.

That the distinction between general and local in disease is real, is a statement supported by a consideration even of the infective diseases; for example, tuberculosis and cancer, where the same cause may produce either. So also an enlarged lymphatic gland or a local collection of pus may present the same anatomical characters as lymphadenoma or pyæmia, but is not the same disease. May it not, therefore, be supposed that it is possible to have in all the tissues and organs—epithelial, vascular, nervous, cutaneous, articular—either a local disease from local causes, or a condition which is really an expression of some general disease—systemic, hæmic or other?

This paper is founded on an analysis of 39 cases of local arthritis met with at Strathpeffer Spa. All gouty degeneration of joints, and arthritis recognised as resulting from specific or septic invasion, or due to disease of the central nervous system, is excluded from view, as none of these can be regarded as local diseases. A few examples may serve to illustrate the general characters and varieties of local arthritis met with in the practice of a Spa physician:—



1. In August, 1891, a medical man, aged 44, presented himself with arthritis of the right shoulder joint. He is an anæsthetist, and had sprained the joint in the previous October in endeavouring to lift a patient. Twenty years before he had had scarlet fever and slight rheumatism ; but, with this exception, there was no personal or family history of joint affections and the general health was good. On examination, there was much effusion into the joint, with puffy swelling anteriorly and abundant fine erepitation, but no pain on movement. He was given warm douche baths for three weeks and inunctions of hot oil. Six months later there was little or no effusion, but much fine creaking on movement. Four years afterwards the joint remains much the same ; no pain, very little swelling ; but some limitation of the upper and posterior movements. No other joint was or is affected.

2. A gentleman of gouty family went to Carlsbad for uric acid gravel when 52 years of age, and there had his first attack of gout, which recurred in three months' time. Next year he had a serious attack of influenza and broncho-pneumonia, and this was succeeded by swelling in the right shoulder joint, and pain in the joint and upper arm. This went on for 12 months, when he came under my care at Strathpeffer and underwent a course of douche baths, and finally blistering over the front of the joint. Next year he returned for a second course of baths. He was much better, able to use his arm freely and even golf a little. There was no effusion but some large crepitations in the joint, with bony outgrowth and slight stiffness of the posterior movements. In all probability an injury in golfing or shooting was the cause of this arthritis. The very wide and forcible sweep of the shoulder in driving the golf ball, together with the shock of a bad stroke, are apt to injure the joint, and I have met with several cases of threatening shoulder arthritis in golfers.

3. A coachman, aged 70, previously healthy and without rheumatic tendencies, was much debilitated by an attack of influenza. As soon as he got about he noticed that his left

shoulder was very painful in putting his coat on and off. On examination some weeks afterwards all the posterior movements were very painful, and there was grating on movement. A blister was applied and under warm douching the arm became much more supple and less painful. Three months afterwards the arm remained comparatively free from pain, but the freedom of movements was somewhat limited by the changes in the joint. In this man the left or driving arm had been, no doubt, more exposed to injury than the right.

4. In another case right shoulder arthritis began, without history of injury, in a healthy old gentleman of 75, sent to me by Dr. James Crevie. Three months after the onset there was a characteristic tender hemispherical swelling over the front of the joint, and great pain and protective muscular contraction when the arm was rotated or circumducted, or raised more than  $45^{\circ}$  from the body. No other joint was affected. Treatment consisted of one application of the electro-cautery, followed by a course of low pressure douches and an ointment of veratria to allay pain. After a stay of eighteen days this gentleman left the Spa quite free from symptoms, an exceptionally favourable result. On referring to my notes I see that three years before this patient was suffering from general debility after influenza and vague rheumatic pains, with slight cramp in the hand and arm after writing, but that I was unable to discover at that time any affection of his joints.

According to the writer's observation, true local arthritis is rare in the first half of life, indeed, before the age of 45 ; and any signs of degeneration of a joint in a young person should be viewed with extreme suspicion, as they may probably foreshadow more serious disease. For the occurrence of local arthritis in a young or middle-aged subject indicates an altogether exceptional and unhealthy vulnerability of the joints ; and in such persons, especially in women, it is not uncommon for other joints to become affected after a longer or shorter interval.

5. Exceptional interest attaches to the case of a lady's maid, aged about 29, who came to Strathpeffer two years after the onset of right shoulder arthritis. She complained that the pain was sometimes most severe and greatly increased by any sudden movements and by railway travelling. There was the usual tenderness and swelling over the head of the humerus. All movements were accompanied by crackling or crepitation, and were fairly free, excepting upwards and backwards (posterior movements) which at once induced pain and protective muscular contractions.\* This patient had the usual treatment by blister and douches, followed by galvanism, with decided benefit. Four months later she writes that there has been no return of the acute pain, but the joint is sometimes "rather sensitive and stiff."

In considering the question whether any given arthritis is a local disease or the first expression of a generalised constitutional malady, the presence or absence of general disturbance of health will assist the diagnosis. Sometimes, however, only the lapse of time can solve this doubt.

6. For example, a lady, aged 67, had been losing flesh and strength for twelve months, and in May was taken ill with what was described as "bilious fever," followed by exceedingly severe pains in the right shoulder joint and arm. The acute pains, or, as she described them, "jumping" and "sickening" pains, "like hot tongs," were referred to the joint, the dull aching pains to the upper arm and side of the neck. Three months after onset she came under observation at Strathpeffer. There was then obvious effusion in the joint with grating and severe pain on attempting the posterior movements, and some wasting of the scapular muscles. All the other joints were normal. In this case the obvious failure of health and the rapid pulse, about 100, pointed to the more serious disease, whilst the entire immunity of all other joints after three months led me to hope otherwise.

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\* It may be observed that in all sensitive conditions of the joint a delicate test is afforded by these latter movements, viz: those posterior to the plane of the body. By their aid one can put varying degrees of tension on the capsule of the joint.



This lady took a course of sedative baths—peat and douche, with quinine and digitalis internally. Little benefit however resulted, and two months later her medical attendant, Dr. W. T. Drew, was good enough to write and tell me that arthritis had developed in the other shoulder and hand, and later in the feet and knees.

Of seventeen cases of *simple arthritis of the shoulder*, ten were male and seven female. There was a clear history of injury to the joint in eleven cases, and in one the arthritis followed a definite exposure to cold and damp. In four cases it began in the left shoulder, in three of these after injury, the fourth being the case of the coachman before mentioned. The accidents noted are such as these : “fall on the elbow,” “twist in lifting a heavy weight,” “blow on the front of the arm,” “stumbled over a drunken man, striking both hands on the ground.” In the last case arthritis set in on both sides at once. The disease was limited to one shoulder joint in twelve cases (rather more than two-thirds) ; in four others it affected the other joint after an interval varying from a few weeks to five years. In one exceptional case arthritis began in both shoulders in a lady of 53 sent to me by Dr. Campbell, of Dundee. Five years later, after an accident, it attacked the left knee, and two years subsequently, when she came under my care, there was decided arthritis in the left knee, ankle, foot and wrist, with very slight changes on the right side of the body, excepting only the metacarpophalangeal joint of the forefinger. Such cases as these illustrate the point of contact, if one may so speak, between local and general joint disease. They are not uncommon in the years immediately following the climacteric in women, and must be related to some failure of nutrition at that period. In the paper on generalised arthritis already referred to, I have mentioned the favourable intermissions which not infrequently occur in the progress of that disease, when met with about the climacteric, as affecting prognosis.

The two following cases illustrate local arthritis in another joint :

7. In September, 1890, a lady, aged about 55, presented herself with a rather severe arthritis of the right knee, for which, unfortunately, massage had been used, but which got quite well with rest and careful douching. Two years later she came again, this time unable to lift her right arm, as the result of two falls on the shoulder. The pain continued for a long time with much limitation of movement and tenderness over the head of the humerus, but yielded eventually to blistering and peat baths. Another interval of two years and this patient returned again with trouble in the hip joint, but the knee and shoulder remained quite well.

8. A lady, aged about 45, noticed that her right knee was becoming much swelled. After some years it also became affected with sudden attacks of intense pain, which she ascribed to its "going out." The left knee was invaded 12 or 13 years after the right, and when she came under observation in 1891 (15 years after the onset of the disease) there was obviously much degeneration in both joints with destruction of cartilage and grating. This patient has since taken an annual course of douche baths at Strathpeffer. The pains are much relieved; she can walk short distances, but takes most of her exercise on donkey back. At the present time, twenty years from the onset, it remains, so far as one can judge, a purely local disease.

Of eleven patients with *knee arthritis* as many as nine are women, and of this number five were at or about the climacteric; one was a girl of 20 (a very unusual age), and the other three were between 60 and 70. There was a family history of gout, rheumatism or arthritis in six cases out of the eleven, gout being noted four times. The exciting cause was set down as injury in two cases. In three one knee only was involved, in five the second knee became affected after an interval, varying from a few weeks or months to 2, 10, and 13 years. In three cases the shoulder, finger or toe, were in the same manner secondarily affected. It is probable that many cases described as "rheumatism in the knees" in elderly persons are really examples of local



arthritis. It occurs more often than not in arthritic families, and often follows slight injuries to the knee in gouty women past middle life, and in both men and women in the senile period. When severe it usually becomes symmetrical.

Another variety of local arthritis affects the basal joint of the thumb.



Thumb-base Arthritis, in a gentleman ætatis 70.

9. A delicate lady of gouty family history began to suffer with pain, swelling and stiffness in the carpometacarpal joint of the right thumb, shortly after the cessation of the



menses. When I saw her the condition had been present nearly three years, and the left thumb was becoming similarly affected. After an interval of five years I saw her again, and now both the joints were slightly flexed upon the palm and incapable of extension, converting the palm into a permanent cup. A cupped palm always signifies in my experience thumb-base arthritis. The photographs illustrate this condition in another case, that of a gentleman, in whom it supervened in both hands at 70 years of age.



Thumb-base Arthritis, in a gentleman ætatis 70.

Nine cases of somewhat severe thumb-base arthritis that have been recently under observation, comprise two men and seven women. Heredity showed gout or rheumatism in at least three cases. The average age at onset was 62, the right

thumb was first affected in six, in three of whom the arthritis after a considerable interval remained limited to that side. In an equal number of cases the left thumb was invaded after from half a year to three years.

It remains to notice two other forms of arthritis that might be regarded, but I think erroneously, as of a local character. Cases such as the following are not infrequent. A man of 30 says that eleven years ago he had a severe attack of rheumatic fever, and when able to travel, came to Strathpeffer, took a course of waters and went away quite well. He has returned after eleven years; his general health depressed, and arthritis has lately invaded the middle joint of one of his fingers. Again, a man of 28, employed as a night detective, is exposed in the course of his duties to a succession of what appear to be severe chills. After one of these when he gets about, his neck remains stiff and permanently fixed with cervical arthritis.

The joint affection in such cases may be best designated *Residual Arthritis*, being the result of a constitutional disease.\*

Then there is the very common arthritis of the terminal phalangeal joints ("Last Joint Arthritis," "nodi digitorum," "Heberden's nodes"). This is, in the writer's opinion, the usual form of articular gout,† whether hereditary or acquired, in middle aged women, and is therefore excluded from the category of local affections. The different outlines assumed by this arthritis in a number of cases are figured in the paper already referred to.

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\* For cases of Arthritis following Acute Rheumatism, see Dr. Sansom on "*Complicated Rheumatism*" (International Cliniques, 1895, Vol. 1, p. 19).

† In attributing this arthritis to gout, I follow Begbie, Dyce Duckworth, Emil Pfeiffer and others. The other view is represented by Dr. A. E. Garrod, who follows Heberden in denying the connection of terminal arthritis with gout, and defines it as a "Sub-variety of multiple arthritis deformans."—See article "*Osteo-Arthritis*" "*Twentieth Century Medicine*."

What general conclusions can be drawn from the preceding observations? The cases taken altogether exhibit local arthritis as a disease belonging to an advanced period of life (average age 54); it affects women more often than men (25 to 14). There is evidence very often of a basic arthritic diathesis (a family history of gout or rheumatism in 16 cases). Four of the total 39 had personally suffered from rheumatic fever 7, 11, 15, and 25 years before the arthritis, and one had had the gout. But such a record can scarcely be regarded as exceptional at 54 years of age. Of the cases among women, 13, or more than half, occurred between the ages of 45 and 55. Taking the two sexes together there were only four cases younger than 45 years, and half the total number were upwards of 60. Local arthritis, therefore, belongs to the climacteric and the senile periods. In the latter it partakes of the nature of all senile changes. It is briefly or obscurely inflammatory, and mainly and progressively degenerative. Probably very many slight cases pass unnoticed. The importance of injury as an exciting cause has been already referred to. The joints affected are the most vulnerable joints, and the right side of the body in preference to the left. With respect to the hip joint, so important in the history of Osteo-arthritis, slight cases which alone are likely to be seen at the Spas, are difficult of diagnosis and are sometimes, no doubt, set down as sciatica, from which indeed the early stages of hip joint arthritis are not easily distinguished. Signs of solitary or local arthritis are not infrequent in the temporomaxillary joint, especially in members of gouty families, and they are common in many persons in the metatarso-phalangeal joint of the great toes. This joint, like the knee, is subject to pressure and is exposed to many chances of injury—by boots and otherwise. With regard to the frequency of the disease in the right shoulder joint, a special liability to damage results from its extreme mobility and the constant use of the right arm. Not far behind the shoulder in variety of movement comes the saddle-shaped articulation at the base of the thumb. This joint is, moreover, constantly exposed to strain and shocks,



as the palm of the hand is the natural buffer of the body, both for pressure and weight, and to break the force of falls and jars.\*

With regard to the *treatment* of local arthritis, the first and most obvious indication is rest. Massage and passive movements are applicable, if at all, only in the latest stages of the malady. Effusion and pain often subside when the movements of the joint are suitably restricted. As the disease depends upon a failure of nutrition, although local, it is important not to neglect the general health. Gouty conditions, or debility, or both, must be dealt with, if present; and it is here that the eliminative, and, as the French say, “reconstituant,” properties of mineral waters are so valuable. A course of sulphur or saline waters, judiciously combined with dieting and baths, will promote healthy nutrition, and is particularly indicated for the disorders—articular and otherwise—that follow the cessation of the menses. If debility is marked, quinine, arsenic and strychnia are the more useful drugs. For local treatment the writer relies on blistering, if effusion is present, and is accustomed to keep up the counter irritation as long as there is acute pain or sign of fluid in the joint. The actual or galvano-cautery may be used if a more rapid effect is desired. Afterwards, the main reliance is on thermal treatment in some form. Much remains to be done by the scientific application of heat. To the joints one may apply heat either in the form of immersion baths or poultices, in douches of hot water or hot sand, by hot vapour or hot air. At Strathpeffer the hot douche, and peat baths and poultices are generally employed. Air or gas can, of course, be used at a much higher temperature than either liquids or solids. It is thus possible to administer through a gaseous medium

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\*With reference to the effect of traumatism in provoking joint affections, *Verneuil* says “a renewal of symptoms after an injury is very common—sprains, fractures, contusions, surgical operations, etc. The awakened manifestations of the diathesis are most variable; there may be a fresh attack of acute generalised rheumatism, *sometimes a local affection only*” (italics are R. F. F’s.).—Internat. Encyclop. Sur., 1882.

an exceedingly active thermal stimulation, and powerful effects are obtained on the circulation and probably on the nutrition of the part. An apparatus to produce these effects has been devised, and has met with some success in arthritis. But the thermal treatment of joint affections by a gaseous medium is as yet in its infancy. In connection with baths, careful inunctions of hot oil or a compound of iodine of potassium and lanolin may be usefully employed. The patient should be warned to protect the part at all times from cold and damp. In the late stages the treatment of adhesions or deformity by surgical means sometimes becomes necessary.

The following is a provisional etiological classification of joint affections :—

Joint affections are

- (1) Due to *blood states* (hypothetical Lithœmia etc.)
  - (a) Acute and chronic gout.
  - (b) Last-joint arthritis (Heberden's nodes).
- (2) Due to constitutional *specific disease*. Septic etc. invasion.
  - (a) Gonorrhœa.
  - (b) Scarlet and other fevers.
  - (c) Dysentery, etc.
  - (d) Acute rheumatism (probably).
  - (e) Tuberculosis.
  - (f) Syphilis.

Pyœmia ("purulent arthritis"),  
(arthritis of young infants, etc.)
- (3) Due to central *nervous disease*.
  - (a) "Charcot's disease"—tabes dorsalis, hemiplegia, etc.
  - (b) Syringo-myelia.
  - (c) "*Generalised arthritis*" ("Rheumatoid" or "Osteo-arthritis," probably).
- (4) Due to *local causes*.
  - (a) Synovitis (injury and cold).
  - (b) "Chronic rheumatism" (cold and damp).
  - (c) "*Local arthritis*" (injury).

DR. HINGSTON FOX said he felt diffidence in criticising a paper on a speciality written by a specialist, but the cases discussed by Dr. F. Fox were very rebellious to treatment and apt to cause a feeling of despair in the minds of medical men. He queried whether the term local chosen for the cases was justifiable, for he thought the constitutional element in the trouble was really predominant, and asked if this were not usually found to be the case ; supposing a large number of individuals met with the same arthritic accident, he asked if those with an hereditary or constitutional weakness of the joints would not suffer out of proportion to those free of such peculiarity. He asked if fluid effusion into such joints were common ; he had seen an elbow joint filled as was thought with fluid, but a trocar had failed to extract any from it. He mentioned a case of his own in which the patient had cured himself by alternate douches of hot and cold salt water.

DR. BLAKE thought there was no pathological entity to which the term rheumatism could be applied. Scarcely enough prominence had been given to the nervous element in arthritis, one patient got herpes and another arthritis from the same blow. He said that on the Continent and in England there had been during the last twenty years a growing suspicion that the nervous system was largely engaged in rheumatism, and lately the evidence, chiefly clinical, had become overwhelming. He pointed out that in uterine disease, associated with the formation and absorption of pus, arthritic manifestations were common, and this he thought was one great reason why women suffered more than men from arthritis, but the source of the pus was immaterial provided that there was absorption of purulent toxines ; he thought these affected the nervous system, which in turn influenced the joints. The symptom of keratoderma was, Dr. Blake thought, very strong evidence of the neural element in rheumatism ; a common corn might be pathologically defined as a localised neuritis traumatica, which, but for the chance pressure of the boot, would reveal itself as a vesicle ; the pressure on the finger tips involved in the use of the hands leads to a similar result in the case of the upper extremity. He had seen influenza followed by local arthritis on one side, hyper-keratosis on the other, and this in turn by herpes tonsillaris ; a similar keratoderma followed a case of gonorrhœal rheumatism and a crop of corns developed after gout. He thought Dr. Fox's scheme ingenious, but suggested that all cases could be grouped under two heads : (1) ascending neuritis (traumatic or catarrhal) ; (2) descending neuritis usually toxic, in origin, thus emphasizing finally his belief that the neural element was the earliest and most important.

DR. FOX, in reply, agreed that rheumatoid arthritis was really a neurosis, but still maintained that the form of arthritis he had described was local, with local cause, local effect and local treatment.

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**JANUARY 22nd, 1896.—Clinical Evening.**

**UNILATERAL SPASM OF FACIAL MUSCLES.**

*Case shown by Dr. Shadwell.*

DR. SHADWELL showed a case of spasms of the left side of the face in a woman of about 35. The affection, which was of a clonic character, had come on after confinement; all the small muscles of the side of the face supplied by the seventh cranial nerve was affected. There was a history of a previous attack of left hemiplegia, from which, however, recovery had been practically complete.

DR. FRED J. SMITH thought that the cause of the spasms might possibly, if not probably, be a scar in the cortex of the motor area, and suggested that a trephining operation might give relief if the patient would consent.

**ATHETOID MOVEMENTS OF RIGHT HAND.**

*Case shown by Sir Hugh Beevor.*

SIR HUGH BEEVOR gave the following history of his case :—

M.C., 16, servant, admitted under Dr. Ferrier, July 13, '95, with tremor of right hand.

*Family history.*—M., 8 children, 3 miscarriages.

*Personal history.*—Dr. Pritchard removed polypi for obstruction of nose six weeks ago.

Two years ago at commencement of menstruation, and after excitement of brother's illness—tremor of the whole body, shaking the bed, lasted two weeks; improved gradually until right arm and hand alone were affected; these after three months ceased. A fright of trivial character six months later induced great stuttering for a fortnight, and movements in arm till Christmas (6 mos.). Since this, every three months an attack of tremor has seized the right arm, sometimes grimaces, jerking of head and jerky speech would be also present, and occasionally the left arm was implicated. Except slight anaemia and loss of knee jerk, nothing abnormal but tremor has been noted during four

weeks' stay in hospital. The tremor is described as rhythmic, increased by voluntary movements and by excitement, rate 6 per sec. The chief movement is of the hand from right to left, as it is held in the semi-prone position. She was treated by spinal douche, and then by putting the right arm in Plaster of Paris, and discharged with very slight movements. Re-admitted on Dec. 11th, 1895. Movements when awake have not ceased since discharge. Movements of arm and tendon reflex as before. Chloral Hydrate, gradually increased up to gr. xx every three hours—slightly less tremor, stopped Dec. 19. Liq. Coniñe Hydrobromatis 5% sol. m. ij. bis die injected. Jan. 11, dosage has increased to m. viii. There has been no improvement of any permanent character.

DR. A. DAVIES said that some year or so ago he had shown to the Society a somewhat similar case, which he had ventured to call Paralysis Agitans in an early stage. His view had been controverted by the Fellows present at the time, but further observation of the progress of the case had confirmed his diagnosis.

DR. COTMAN said, that as treatment by suggestion by Mr. Woods had been advised, he should like Mr. Woods to commence operations then and there, that the Fellows present might see the process.

DR. W. RAWES said that these cases were called functional, but he believed that real lesions were present. Such cases were common in asylums, and he mentioned a case of squint, in a girl under his charge, which seemed to be purely functional (so called) ; it disappeared under good feeding and neglect of the patient's complaints of it. As regards treatment he objected to the use of chloral hydrate or bromides or any such nervous depressants, believing they did more harm than good.

MR. OPENSHAW expressed his belief that the case was one of pure malingering.

SIR HUGH BEEVOR replied that he thought the case was certainly functional. He agreed with Dr. Rawes as to the advisability of avoiding nervous depressants—so called sedatives and hypnotics.

## POST-HERPETIC NEURALGIA TREATED BY SUGGESTION.

### *Cases shown by Dr. Woods.*

DR. WOODS said :—Both these cases you have seen before. Sir Hugh Beevor showed them at the last clinical evening in November, and then asked me to take them in hand.

As you doubtless can remember, treatment by medicine, internally and externally, had been tried while they were inmates of King's College Hospital for some time, besides galvanism, suspension, and in addition the man had had the actual cautery.

I will now briefly describe the cases :—

E. A., female, age 60. Had suffered for about two years, had acute pain, and at times intolerable itching of the right side of the head and neck, extending to the thorax. The pain was especially acute behind the right ear. Her neck was stiff, and any attempt to move increased the suffering so much that she would call out. I have seen her about seventeen times. She is much better, the pain in the neck appears to have entirely gone, but she has occasionally pain of an aching character behind the right ear. Her general health has improved, she has gained in weight, she sleeps well, takes her food with relish, and is able to work all day ; she can also move her head freely. The treatment I adopted was the same as I demonstrated to you about two years ago, and it consists simply of placing one hand or finger on the painful spot or spots, and the other on the head, and holding them in position for a minute or so, varying the pressure according to relief given after removing the hands. Sometimes two or three applications are required in cases like these. At the first sitting the pain only left the patient for a few hours, but after about the third she had an interval of freedom for three days, and lately I have only seen her once a week. I always impress upon the patient that the pain ought to go, and the results are generally quite satisfactory. I do not look upon this case as well, but her condition has greatly improved, and with a little more treatment she may recover. I may mention that on one or two occasions the pain returned at the back of the ear, if the day happened to be cold, so I remedied this by fixing a piece of cotton wool behind her ear after painting it with glycerine so as to make the wool keep in position.

J.S.W., male, aged 65. Has had neuralgia for about six years, chiefly on the right side of the head and neck. I have



seen him about sixteen times. After the first treatment the pain disappeared for about 24 hours, and the intervals gradually got longer so that now he goes a whole week without any pain, his general health has improved, he can move his head without inconvenience, he sleeps well, has a good appetite, and is able to walk long distances. The giddiness from which he suffered has also left him. The treatment was much the same as that adopted in the former case.

This patient had had the following remedies before he came under my treatment:—Antipyrine, Salicy Soda, Quinine, Arsenic, Lin. Opin, Lin. Belladon., Pot. Bromid., Liq. Morph., Pulv. Zinci Oxidi, Ammon. Chlor., Cantharides, Exalgine, Lin. Aconiti., Hypodermic Injections, Caution.

SIR HUGH BEEVOR and two or three other Fellows strongly corroborated Mr. Woods's statement as to the immense improvement both the patients displayed. They now looked bright and cheerful instead of depressed and miserable. He congratulated Mr. Woods, as well as the patients, on the very great success of the treatment.

## HEMIANOPIA.

*Case shown by Dr. Fred. J. Smith.*

DR. FRED. J. SMITH gave the following history and remarks on the case:—

E.S., æt 52, admitted with hæmatemesis from cirrhosis of liver in Jan., 1895, discharged March, 1895. On Jan. 23rd, while in hospital, had severe heart pain all day and speech rather thick; at tea time his left arm was found to be paralysed, and the left leg paretic; next morning left face was also paralysed and hemianopia (right side of both retinæ—left half of fields) was present: in a few weeks the paralysis completely passed off and only the hemianopia remains and is apparently permanent; it has altered very little if at all in the last year, and its limitation is almost absolute to half fields. There seems to be now practically nothing remaining but the hemianopia, and the question arises—What is the nature of his lesion and where is it situated? From the gradual onset without loss of consciousness I feel inclined to believe that its nature is thrombotic,

though it may possibly be a small hæmorrhagic focus. Growth of any sort may, I think, be excluded, owing to absence of headache, vomiting and optic neuritis.

The locality is a little more difficult to fix. The symptom homonymous hemianopia may come from a lesion situated anywhere between the optic chiasma and the occipital lobes, the tract and the lobes—the two ends of the region—being the commoner seats. The features laid down by experiment and observation to determine the exact seat are :—

(1) *Associated anæsthesia*.—This point I regret to say was not tested at the time of onset as he was not under my care, but there is certainly no trace of anæsthesia now left.

(2) *Reflex to light*.—If light can be thrown on the blind retina only, then the presence or absence of this reflex will determine whether the lesion is in the tract, because the centre for this reflex lies higher than the extremity of the tract. In this patient the right pupil reacts well to light, but the left one scarcely at all ; unless the experiment be done with considerable accuracy of detail it is almost useless, because the fibres from the seeing half of the retina would start the reflex ; the indications, however, in this case point to less light being received through the left eye, and as it is a right hemianopia the larger (functionally) half of blindness is in the left eye, consequently this indication is for a lesion of the tract ; but against it is the associated *temporary* hemiplegia of the left side, for it seems almost impossible to imagine a blocking of such a small vessel as that to the tract without *permanent* damage to the corresponding crus with persistent hemiplegia. The locality must then remain in doubt until (if possible) an autopsy can be obtained.

*P.S.*—The patient died in April, 1896, but no autopsy was possible.

### MOTOR APHASIA.

*Case shown by Dr. Fred. J. Smith.*

DR. FRED. J. SMITH showed a case of motor aphasia with the following history :—

H.W., aet. 63. admitted Nov. 11, 1895, to the London Hospital with right hemiplegia and aphasia.

*Previous history.*—Fairly well, except for slight gout and rheumatism till five years ago. In March, '91, had an apoplectic attack with unconsciousness, the right side was paralysed and speech was imperfect, but recovery of power was nearly complete and of speech practically perfect.

*Present illness.*—Began four weeks before admission with renewed difficulty in speech, weakness of right side and difficulty in swallowing; there was no unconsciousness. The symptoms slowly but steadily got worse till admission.

*On admission.*—Vasc. system, mitral and aortic systolic bruits. Resp., Cheyne Stokes rythm present, but not very marked. Nerv. system: The first eight cranial nerves seemed quite unaffected, single acts of deglutition normal, but continuous swallowing very imperfect; the tongue could not be protruded beyond the teeth. Motor power distinctly weaker on the right side, but no absolute paralysis. Sensibility slightly blunted on the right side. Reflexes: Both knee jerks glib but equal. Speech: Understands everything said to him, and takes interest in reading as though he understood it. Writing: Totally unable to write even his name or to copy anything.

During his stay in hospital urinary features developed, and I thought he would die of uræmia, but with purgatives and iodides and local antiseptics this improved. Temp: normal to sub-normal throughout. Since his discharge from hospital the power of walking and swallowing and of movements of tongue have practically been restored, but speech is still quite lost and also the power of writing.

*Diag.* On admission I at first thought I had to deal with a lesion of the pons or medulla (from the loss of power in movements of the tongue and interference with deglutition), but the rapidity with which the majority of the symptoms disappeared induced me to reconsider that diagnosis in favour of a lesion higher up, and my diagnosis now remains at a sub-cortical lesion beneath the speech centres interfering with the fibres passing from there to the arm centre, and also interfering with those fibres which pass from the third left frontal to the corp. callosum, otherwise how shall we explain



recovery of power without recovery of speech? As regards the nature of the lesion, from the extreme slowness of onset I think it must be thrombotic, possibly due to failure in circulatory power from the valvular defects. The onset was too rapid for sclerosis of an independent character.

### SEBORRHÆIC ECZEMA.

*Case shown by Mr. Hope Grant.*

MR. HOPE GRANT showed a man whose chest, back and arms to the elbows were covered with patches of redness and inflammation of the skin. The affection was really a seborrhæic eczema, but as it usually arose from the wearing of new flannel underwear it was frequently termed "flannel rash."

DR. COTMAN said he had seen many cases similar to Mr. Grant's, they yielded quickly to tar preparations and plenty of soap and water.

### SEVERE ACNE.

*Case shown by Dr. Ettles.*

The patient, aet. 30, was suffering from a symmetrical eruption of comedones on the back, neck, and chest. These began 12 years ago and have periodically suppurated, with the result that the skin in the regions named was covered with small pitted scars. Four years ago he started an attack of acne rosacea, which now forms a large belt round his chest at the level of the shoulders.

DR. COTMAN said he thought Dr. Ettles' case would be very intractable to remedies as it had lasted so long.

DR. FRED. J. SMITH suggested that all cases of acne required great pains for their cure; the reason why so many cases seemed inveterate and obstinate was, he thought, because sufficient trouble was not taken to empty the sebaceous follicles, and then to apply local antiseptics and cleanliness.

MR. ADAMS agreed with Dr. Smith that acne was to be cured by sufficiently energetic local treatment.

SIR HUGH BEEVOR advised that some soap should be left on the skin after washing. He said that imperfect escape of sebum was a great factor in causing acne.

## CONGENITAL DISLOCATION OF HIP.

*Case shown by Mr. Openshaw.*

The patient was a little girl three years of age; the left leg was the one affected, it was three-quarters of an inch shorter than the right, but by extension it could be made to slip down so as to be equal in length with the other. Mr. Openshaw said the case was interesting because the child had met with an accident to the leg when a few months old, and he thought many cases of so-called congenital dislocation of the hip really arose from accidents after birth.

MR. SYMONDS thought the case was more likely to be tubercular epiphysitis than dislocation.

## FRACTURE DISLOCATION OF ANKLE.

*Case shown by Mr. Openshaw.*

The patient was a man aged 23, who met with an accident 4½ months ago. He and his horse fell in such a way that his right leg was under the horse and crushed by it. The leg was put in back and side splints, in the Northampton infirmary for six weeks. Mr. Openshaw thought it was a case of Potts' fracture with backward dislocation of the foot, and possible separation of the tibia and fibula.

## MICROCEPHALUS AND TALIPES.

*Case shown by Mr. Openshaw.*

The patient exhibited the manner in which deformities frequently co-existed; there was a very small head with microcephalic idiocy and in addition talipes equino-varus of the usual type.

MR. SYMONDS asked if Mr. Openshaw intended to do a craniectomy for the microcephalus.

## CHARCOT'S JOINT.

*Case shown by Mr. Symonds.*

MR. SYMONDS showed a case of disease of the tarso metatarsal joint of the great toe of the left foot of a man of middle age.

From its appearance and from the absence of pain he had diagnosed it as Charcot's disease ; he proposed to do only a limited operation on the joint, remarking that extensive operations or amputation were unnecessary in such cases as they did quite well under much more conservative surgery ; in support of this view he quoted a case that had occurred to him in which four perforating ulcers were present in the same limb and did quite well with simple scraping.

DIVISION OF TENDONS FOR CONTRACTURES  
FOLLOWING SEVERE INJURY TO THE FORE-ARM.

*Case shown by Mr. Tubby.*

The patient was a little girl, who came to Mr. Tubby with a history of severe injury to the fore-arm followed by suppuration and sloughing, and showing a large contracted scar as the remains of the trouble. At a first operation he had dissected out the median nerve and freed it from scar tissue, the contracture of the hand was, however, only very partially relieved by this procedure, so he proceeded to do a second operation which consisted in dividing all the flexor tendons just above the wrist. The result had exceeded his most sanguine expectations and the child could now use the hand (it was the right arm which was affected) with perfect freedom of movement.

MR. SYMONDS congratulated Mr. Tubby and his patient on the excellent results which had been obtained.



## THE ANNUAL GENERAL MEETING.

FEBRUARY 12TH, 1896.

THE PRESIDENT, CHARTERS J. SYMONDS, ESQ., IN THE CHAIR.

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DR. RAWES and DR. J. W. OLIVER were appointed Scrutineers of the Ballot.

Report of the Council :—The Council's Report for the past year was read by the Senior Hon. Secretary. On the proposal of DR. DAVIES, seconded by DR. COTMAN, it was received and adopted, and ordered to be printed in the Transactions. (*Vide* p. 13).

Report of Auditors :—The Auditors, DR. GLOVER LYON and Messrs. GORDON BROWN, HOPE GRANT, and F. R. HUMPHREYS, reported that they had examined the Treasurer's Bank Book and Book of Accounts, and having found them correct had attached their signatures to the Balance Sheet for 1895 (*vide* p. 18), which was presented by the Treasurer.

Report of the Library Committee :—This Report (*vide* p. 15) was read by the Senior Hon. Secretary, and was accepted, and ordered to be printed, on the motion of DR. RAWES, seconded by DR. RUTTER.

On the motion of DR. COTMAN, seconded by DR. NEWTON PITT, a hearty vote of thanks to the retiring President was carried.

This was acknowledged by MR. SYMONDS in very feeling words, expressing the pleasure his Presidency had given him.

On the proposal of DR. F. J. SMITH, seconded by DR. RAWES, a vote of thanks to the Vice-President, Treasurer, and Librarian, was carried by acclamation, and was replied to by DRS. TURNER and ARTHUR DAVIES.

On the motion of DR. OLIVER, seconded by DR. DAVIES, a vote of thanks to the Council, Auditors, and Secretaries was carried, and was appropriately acknowledged.

The result of the Ballot was then reported by the Scrutineers. The selections made by the late Council had been accepted unanimously, and consequently the following officers had been selected to hold office from February, 1896, to February, 1897.

## LIST OF OFFICERS, 1896.

## PRESIDENT.

G. ERNEST HERMAN, M.D.

## VICE-PRESIDENTS.

R. HINGSTON FOX, M.D.  
T. MARK HOVELL.T. H. OPENSHAW, M.S.  
ARTHUR T. DAVIES, M.D.

## TREASURER.

F. CHARLEWOOD TURNER, M.D.

## TRUSTEES.

H. I. FOTHERBY, M.D.

F. M. CORNER.

## LIBRARIAN.

ARTHUR T. DAVIES, M.D.

## ORATOR.

R. HINGSTON FOX, M.D.

## SECRETARIES.

FRED. J. SMITH, M.D.

A. H. TUBBY, M.S.

## COUNCIL.

T. H. ARNOLD CHAPLIN, M.D.  
BERTRAND E. DAWSON, M.D.  
J. McCULLOCH ETTLES, M.B., C.M.  
HOPE GRANT.  
THOMAS GLOVER LYON, M.D.  
JOHN W. OLIVER, M.D.WILLIAM RAWES, M.B.  
HENRY J. SEQUEIRA.  
ST. CLAIR B. SHADWELL, M.D.  
CHARTERS J. SYMONDS, M.S.  
JAS. H. TARGETT, M.S.  
JOHN F. WOODS, M.D.

## AUDITORS.

F. GORDON BROWN.  
HOPE GRANT.FRANCIS R. HUMPHREYS.  
THOMAS GLOVER LYON, M.D.

## LIBRARY COMMITTEE

*(Appointed by the Council).*JOHN W. OLIVER, M.D.  
R. HINGSTON FOX, M.D.T. GLOVER LYON, M.D.  
HENRY J. SEQUEIRA.

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